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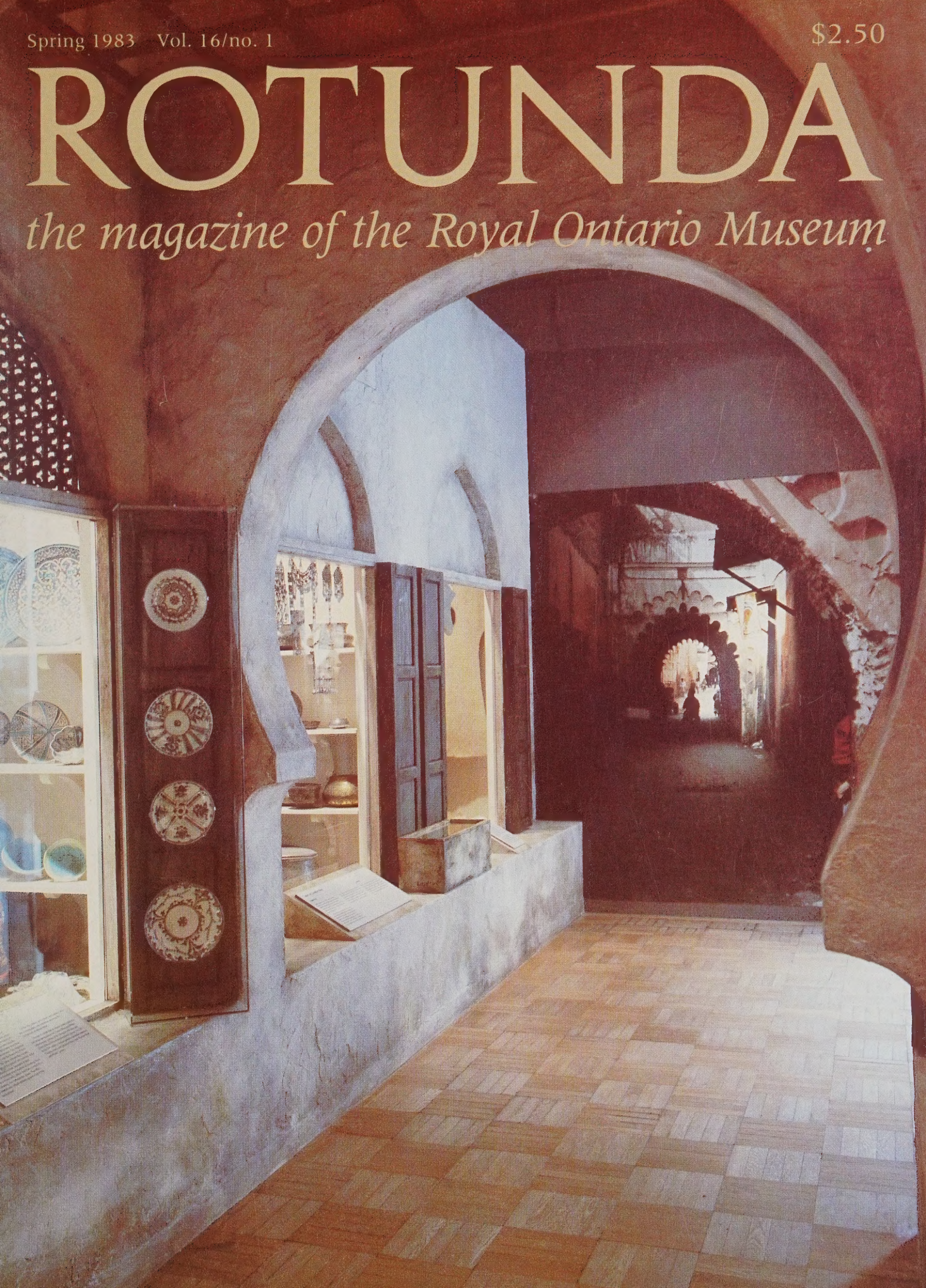
ROTUNDA

the magazine of the Royal Ontario Museum



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ROTUNDA

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Volume 16, Number 1, Spring 1983

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Cover: A reconstruction of the bazaars and shops of the Near East, in the ROM's Islamic gallery. See page 20. Photo: Bill Robertson, ROM.

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The Dome of the Rotunda

Rotunda, *as practically all our readers are well aware, takes its name from the domed, octagonal area that forms the Museum's main concourse. But how many of our visitors pause to study in detail the magnificent mosaic that forms the ceiling of the dome and is one of the Museum's greatest architectural splendours? For those who do, David Young, head of the* ROM's *Museum Advisory Services has provided the following short guide to the mosaic's symbolism.*

David A. Young

The mosaic ceiling of the dome of the rotunda was designed by Royal Ontario Museum architects as part of the 1932 addition to the main building. Shades of red, blue, and turquoise are set in a background of bronze, rust, and gold—colours reminiscent of the splendid Byzantine mosaics of the Mediterranean world. It took the skilled Italian craftsmen of Connolly Marble and Mosaic Tile, a Toronto-based construction company, eight months to assemble and install the tiles from more than four thousand 12" by 18" sheets of Venetian glass made and cut in Italy. The result is a remarkable piece of mosaic art.

A careful examination of the symbols and patterns arrayed on the ceiling of the dome reveals that the designers sought to convey a single theme. The concept had originated with the ROM's colourful first director of art and archaeology, Dr. Charles Trick Currelly. His intention was to create on the ceiling of the dome an introduction to the Museum as a whole, specifically to its art and archaeology collections. Set above the four arches that form the base of the dome are pictorial representations of four distinct styles of architecture: a Mesopotamian ziggurat; an Egyptian pylon, or gateway to a temple precinct; a Greek temple; and a Maya temple of Central America. Between the arches, broad panels rise to the apex of the dome. Each of the four panels contains three symbolic designs.

As one stands in the entrance to the rotunda and looks up to the left, one sees the first panel, representing prehistoric man and early American cultures. At the top is a depiction of a buffalo or bison, reminiscent of prehistoric cave drawings. The totemic North American eagle in the centre of the panel recalls images of America before the arrival of the Europeans. At the bottom of the panel is the Inca god of thunder, holding in each hand lightning bolts represented by snakes.

The next panel to the right represents early Mediterranean cultures. Closest to the centre of the dome is the Egyptian falcon or hawk, holding in its claw a symbol representing the fullness of life. In the middle of the panel, for the Greeks, is a sea horse. At the bottom the Roman she-wolf suckling Romulus and Remus illustrates the legend of the founding of Rome.

In the third panel (again to the right) reading from top to bottom, are symbols of Oriental cultures: the winged bull of Assyria which stood at the gates of Near Eastern palaces to guard against evil spirits; the sacred white elephant of India; and the three-clawed dragon of China. This panel suggests the scope and power of Asiatic civilizations.

The fourth panel brings us closest to our own time and place in history. At the top is a Christian ornament, the winged lion of St. Mark from Venice; in the centre, the Fountain of the Lions from the Alhambra, Spain, recalling Moorish civilization; and at the bottom, the heraldic griffin, evoking the romance of the Gothic period in Europe. With a lion's body and the head and wings of an eagle, this mythical beast may suggest the fusion or reconciliation of apparently opposite forces—the essential oneness of the earth and the heavens.

This theme of unity in diversity was clearly in the minds of the designers of the dome. The symbolism of the dome suggests a unity of spirit that underlies all that man has attempted to express through his works throughout the ages. This central concept, on which the entire ceiling design converges, both literally and figuratively, is captured in the centre-piece of the dome, an inscription from the Book of Job: "That All Men May Know His Work".

The large illustration shows the centre of the dome. In the square panels surrounding the centre-piece are (counter-clockwise from lower right) the buffalo, the Egyptian falcon, the winged bull of Assyria, and the winged lion of St. Mark. The picture below shows the representation of an Egyptian pylon in the arch between two of the vertical panels.

On the right are four of the other symbols to be found in the vertical panels. Top to bottom: the Greek sea-horse; the Inca god of thunder; the she-wolf suckling Romulus and Remus, symbolic of Rome; and the three-clawed dragon of China.

Photography by Bill Robertson, ROM

THAT
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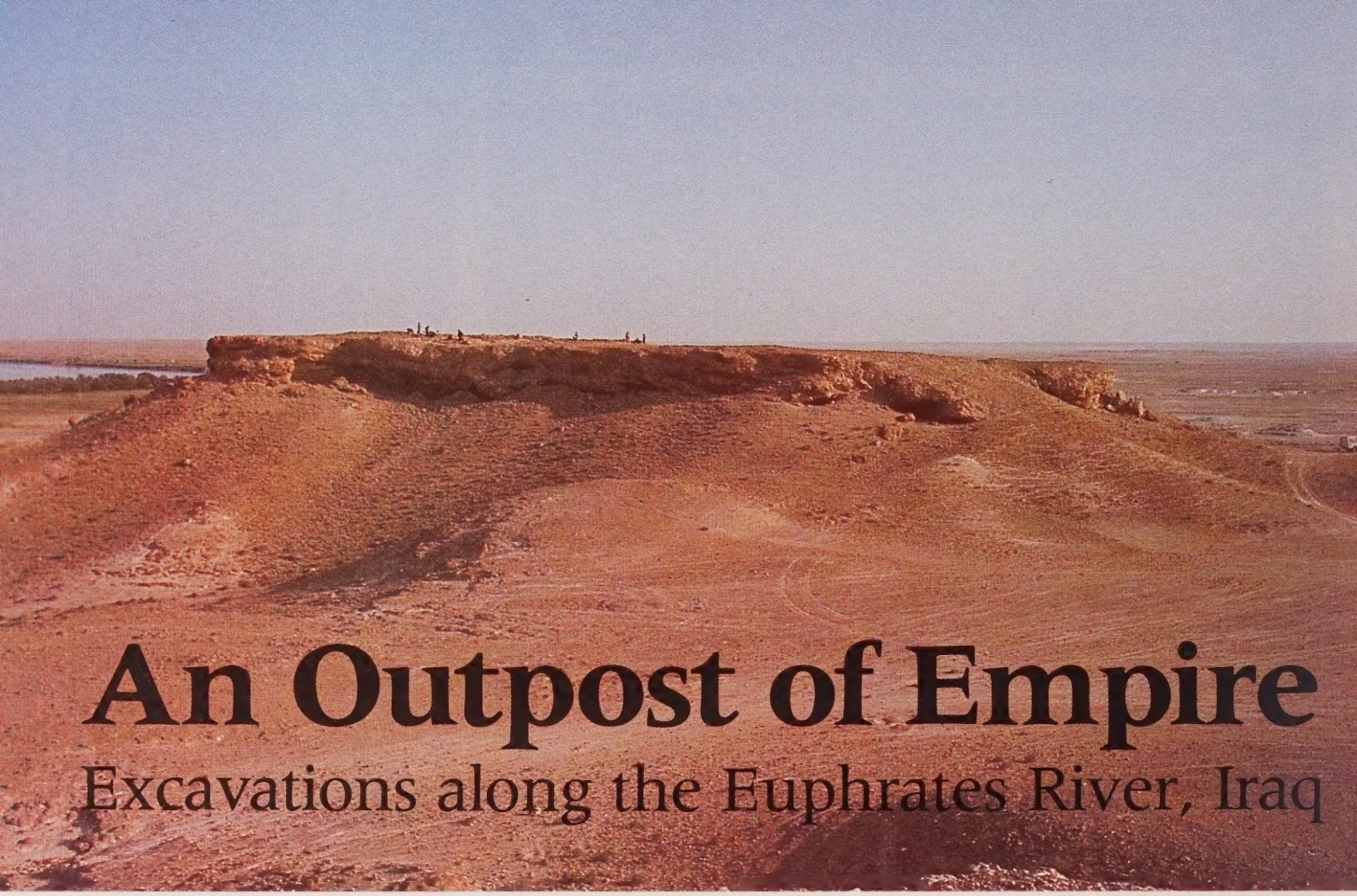


An Outpost of Empire

Excavations along the Euphrates River, Iraq

T. Cuyler Young, Jr.

GEORGE Orwell's splendid essay, "British Boys' Weeklies" contains a passage that has remained vivid in my mind since I first read it almost thirty years ago. In describing the mood and attitude that prevailed in certain kinds of magazine pieces aimed at British schoolboys in the late 1920s and '30s, Orwell wrote:

> The King is on his throne and the pound is worth a pound. Over in Europe the comic foreigners are jabbering and gesticulating, but the grim grey battleships of the British Fleet are steaming up the Channel and at the outposts of Empire the monocled Englishmen are holding the natives at bay.

Here is depicted calm, assured, imperial permanence. Yet, and this is Orwell's point, there is nothing permanent about empires. After all, only 1700 years earlier an outpost of another empire was stretched across Britain as Hadrian built a wall to contain the barbarian Picts and Scots. And Rome was not the western world's first empire; for that we have to go back in history to almost a thousand years before Caesar. It too had frontiers—and they were defended, as we shall see, perhaps more powerfully than was possible with either walls or monocles; but it, like the later empires, is dead and gone.

Last spring, the Royal Ontario Museum's archaeological expedition to Iraq spent two months digging in the rubble of one of the outposts of that first empire. Yimneyeh, as the site is called today, was a small hilltop watch-tower and signal station, part of a massive effort made by the Neo-Assyrians to fortify and defend the Euphrates River.

The rise of the Assyrians to imperial power began in the 9th century B.C. Expansion westwards from their homeland along the Tigris River in north Mesopotamia (see map) soon brought them to the banks of the Euphrates and Habur rivers. Here was a natural boundary of great importance. Beyond the river, in the Syrian and Arabian deserts, lived sometimes restless nomads who often before had pushed east into Mesopotamia, threatening the peace and stability of

Photographs on pages 4–9 are by the author.

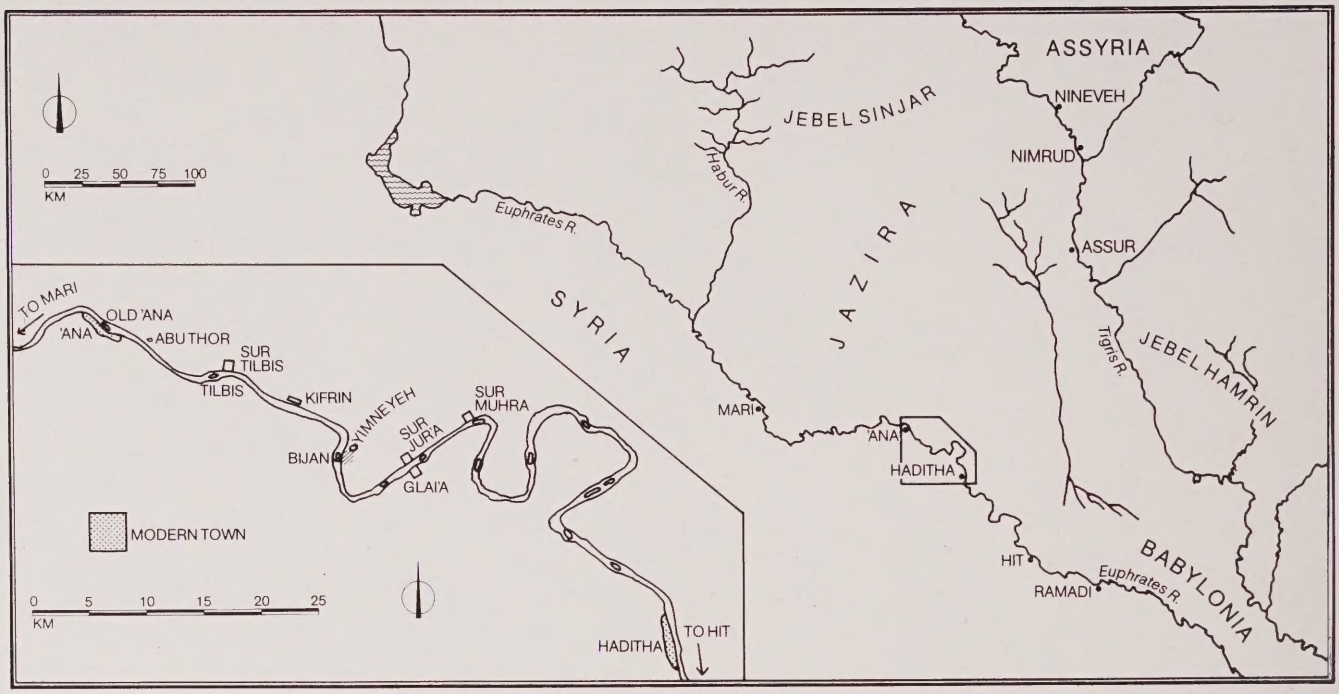
settled civilizations. In more tranquil times, these desert-dwellers led caravans out of the southwest and across the Euphrates, bringing for sale spices and other precious things for which Arabia has long been famous. Babylonia, Assyria's greatest rival at the time, controlled the right bank of the river for much of its length and, as a result, it too was positioned for an invasion of Assyrian territory from the west and south. And finally, the river was a natural highway to the further west and the Mediterranean coast—a highway that could be travelled either by Assyrian merchants or soldiers or, as finally happened in the 8th century, by both. So the great king of Assyria, Assurnasirpal II (883–859B.C.), whose military campaigns were to the Neo-Assyrian empire what Julius Caesar's were to Rome, decided that he would sternly defend the Assyrian side of the Euphrates and in one move both block Babylonian and nomad aggression and control much commerce.

Some 3000 years later the Republic of Iraq decided to build a hydro-electric dam across the Euphrates near the modern town of Haditha (see map). The dam will create a lake reaching almost to the Syrian-Iraqi border, drowning all of the habitable land and part of the desert along the banks of the river. Such an event, while an important step forward in the development of Iraq, is an archaeological disaster of some proportion. Knowing this, the State Organization for Antiquities and Heritage of the Government of Iraq asked the international archaeological community for assistance in excavating as many sites as possible in the area to be flooded. The ROM responded on behalf of Canada, and the evidence gained from our excavations at Yimneyeh, when combined with that recovered at other sites dug by the Iraqis, the British, the French, the East Germans, the Poles, the Italians, and the Japanese, brings into view a detailed picture of just how thoroughly the Assyrians had fortified this imperial border.

Between modern 'Ana and Haditha five major Neo-Assyrian forts have been located and partially dug (inset map). Two are on islands at Old 'Ana and Bijan. The latter site, still under excavation by the Polish expedition, is clear witness to the monumental character of Assyrian frontier military architecture. The wall

Fig. 1: (opposite page) The flat table-top hill with a commanding view over the region on which were found the remains of the Neo-Assyrian fortress at Yimneyeh.

Fig. 2: (above) The massive stone walling on the east side of Bijan island: partial remains of the Neo-Assyrian system of border fortifications.



Map of north Mesopotamia: the heartland of Assyria and the Middle Euphrates region. Inset: sketch map of the reach of the Middle Euphrates on which are situated the major Neo-Assyrian fortresses under excavation.

of the fort at the upstream end of the island is no less than twenty-five metres thick, and much of the walling down the east side of the island, also still in place, is constructed of massive stone blocks, many of which weigh more than a tonne (Fig. 2). The other main forts are large, three-sided earth and stone constructions along the banks of the river—Sur Tilbis, Sur Jur'a/Glai'a, and Sur Muhra —which cunningly use the river itself to form the fourth wall of the enclosure. Sur Tilbis, excavated by the Iraqis, is the most massive, being well over a kilometre long and almost a kilometre wide. Its huge earthen walls, though in the main still unexcavated, are impressive landmarks. Sur Jur'a and Glai'a form a remarkable pair of forts. Here, British and Iraqi excavations have revealed what can only be interpreted as a heavily fortified river crossing, a defended point at which the Assyrian army could cross the river fully protected from attack by any field army that might be operating on the right bank of the Euphrates.

A quick glance at the map shows that these five fortifications are each about ten to fifteen kilometres or one day's march apart; thus communication was easy and it was always possible for the Assyrian army on campaign in the region to spend the night protected. One wishes there had been time to explore a longer reach of the river before the waters of the new lake began to rise, for logic suggests that a careful search upstream from 'Ana and downstream from Sur Muhra would demonstrate that this system of fortifications continues in both directions in a similar pattern. That the system did continue northwestwards toward the Habur River is clear, thanks to French excavations at a similar fort, Khirbet Dineyeh, forty or more kilometres upriver from 'Ana.

Yimneyeh, the site dug by the ROM, though anything but massive, is an important link in this well-designed military system. Here, less than a kilometre east from the river bank, stands a flat table-top hill or mesa, which affords a commanding view of the whole region (Fig. 1). Indeed, on a good day you can see nearly fifty kilometres in almost any direction. More to the point, perhaps, while you cannot see Bijan from Sur Jur'a nor Sur Tilbis from Bijan, from the watch-tower on the top of Yimneyeh you can see all three. Thus this natural feature was able to serve a dual purpose for the Assyrian army: once the site was fortified, the soldiers stationed here could both watch the distance for the approach of an enemy and relay visual signals received from one major fortification at plain level to another.

Such small high forts probably were a feature of the system throughout its

Fig. 3: (above) The view north along the east casemate wall of the inner fort at Yimneyeh.

Fig. 4: (left) The approach to Yimneyeh from the east. The path passes through the original gate in the outer defensive walls.

Fig. 5: (below) The main gate to the inner fortress through the eastern casemate wall.

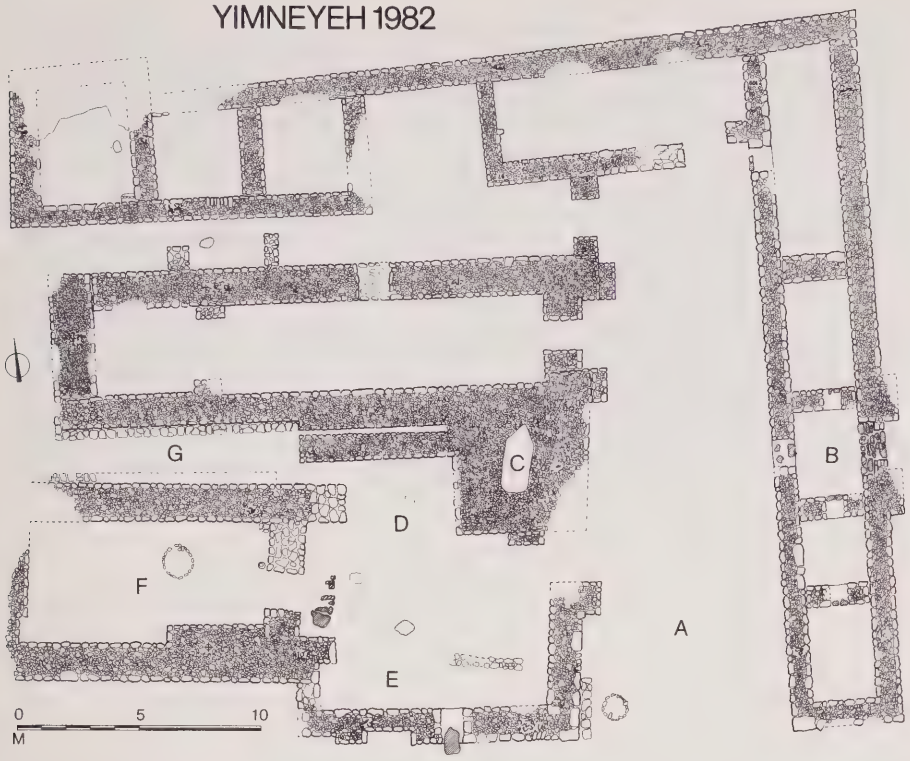
entire length. While the Japanese excavations on a similar flat-topped hill at Abu Thor, between Sur Tilbis and Old 'Ana, turned up only limited remains of ancient occupation, they proved conclusively that the site was occupied in Neo-Assyrian times. The remains at Yimneyeh, where we were lucky enough to recover almost the entire plan of the original Assyrian fortification, provide a good example of the kind of installation that surely also once crowned Abu Thor.

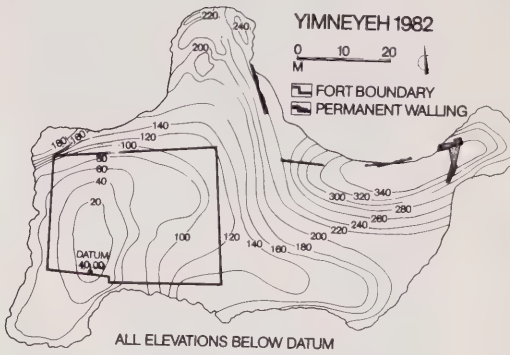
At Yimneyeh we discovered that large outer fortification walls had been constructed along the east and northeast sides, where the approaches to the mesa were gradual (shaded area on Plan 1). The gate through these outer walls was almost certainly on the east side, above the spot where we parked our Landrover (Fig. 4). To the northwest, west, and south the drop down to the plain was so steep that walling was not needed for defence. The whole of the west or river end of the hilltop, however, was defended by an inner fort, the focus of our principal excavation effort (Plan 2).

The east and north sides of the inner fort were protected by casemate walls (double walls defining a line of rooms—Fig. 3), while the south and west sides came so close to the steep edges of the mesa that only lighter single walls (or no wall at all, as on the south side of area A—Plan 2) were needed for defence. The main entrance was from the east through a gate room (room B); the gate itself was flanked by small bastions on either side (Fig. 5). Once through the east casemate wall, one entered what we came to call the "inner parade ground", an open space in which bedrock protruded at several points. Opposite the gate room on the west side of the "inner parade ground", excavation revealed the stone foundations of a large watch-tower (room C). Given its massive walling, this tower could easily have risen to a height of fifteen metres or more. It was probably scaled by a ramp or stairway, the foundations of which lie on the north side of area D. North of the tower was a room entered from the "inner parade ground", whose function remains unclear: we call it the "mess hall". South of the tower is an open courtyard (areas E and D) which could be entered either from the "inner parade ground" or through a postern gate to the south. This courtyard fronted what was certainly the most interesting room in the fort (room F), one we concluded could have been an inner office, the commanding officer's quarters, or possibly even a religious structure of some kind. The first or second function is perhaps suggested, but only suggested, by room G to the north, which had stone-founded benches on both walls and might have functioned as some kind of lounge for those waiting to enter room F.

The whole of the original structure had been much eroded by water and wind—for more than a quarter of the time we spent at the site we were unable to excavate because of the ferocity of the winds from the desert to the north and west. Only the first few courses—sometimes only a single course—of the original stone walls remained, and often the floors of the building had been completely destroyed. There is some evidence to suggest that the Assyrians themselves may have razed the structure when it was no longer needed: they would not have wished to leave standing, in an area that by the late 8th century B.C. was near the geographical centre of their empire, any military structure that could have been put to use by a rebellious provincial governor or a restless group of tribesmen. Neither on the mesa nor on its slopes could we find any evidence for mud brick. It seems likely, therefore, that the original fortification was built entirely of stone, most of which had long ago tumbled or been thrown down the hillside and, still later, had been carried away for house construction in the small village opposite Bijan.

Beyond these architectural remains we found little that would excite the layman. But the more than 9000 excavated potsherds we have processed will prove invaluable to the specialist. Here, for the first time, we have a single, coherent corpus of 9th-century Assyrian pottery, dated by preliminary comparisons with sherds found with tablets from Khirbet Dineyeh. Thus the assemblage should provide us with an excellent base line from which to date other 9th-century sites in north Mesopotamia, something we have been hard-pressed to do with pottery before now.





Plan 1: (right) Topographic map of the summit of the Yimneyeh mesa showing the location of the outer fortification walls and the situation of the inner fort at the river end. The contour lines are in units of 20 cm, giving a vertical distance of 4 metres between adjacent contour lines.

Plan 2: (left) The inner fort at the river end of the mesa at Yimneyeh. Only the lowest courses of the stone foundations remain from the 9th century B.C.

When we come finally to attempt a reconstruction of army life at Yimneyeh in Assyrian times in the wider context of this fortified imperial frontier, what we did *not* find is perhaps most revealing. The size of the establishment suggests a fairly small garrison—perhaps a company of twenty or twenty-five soldiers under the command of a junior officer or regimental sergeant-major. However few the soldiers, they had to eat, yet excavation produced no evidence at all of grain, such as storage facilities, large cooking hearths, mortars, grindstones, or pestles, and little evidence of cooking pottery. In other words, we found no signs of such domestic activities as grinding grain, making bread, baking, or cooking. This was a puzzle, until one day our Polish friends working at Bijan Island came over for a visit. The walk between the two sites took them about half an hour. Then the light dawned in our fuddled brains. Of course: the garrison at Yimneyeh was a detachment from the fortification at Bijan. In view of the lack of any evidence for food preparation at Yimneyeh, it is almost certain that they were supplied daily with ready-made rations from the kitchens and mess at Bijan.

Thus, in the end, we can recreate something of the life at Yimneyeh in the 9th century. A company of Neo-Assyrian soldiers stationed at the frontier fortress of Bijan (possibly, like the legionnaires who manned Hadrian's wall, accompanied by their wives and families) draws in rotation with other groups a month or more of bachelor duty in the fort on the mesa at Yimneyeh. Here, at one of the smallest outposts of that first empire, they possibly ate cold food brought over by donkey from their base camp; fought boredom, the wind, the cold, the heat, and the occasional rainstorm; kept watch for the enemies of their empire and sent their signals up and down the river as ordered; and dreamed of the women safe behind the massive walls on Bijan or living in still greater comfort in Nineveh or Assur. They are as much a part of the past as the defenders of empire in outposts like Peshawar, Rangoon, and Fort Niagara. But they wore no monocles.

T. Cuyler Young, Jr. joined the curatorial staff of the ROM *in 1963. He now is a curator in the West Asian Department and president of the* ROM *Curators Association. He also is a professor in the Department of Near Eastern Studies at the University of Toronto and a member of the boards of the American Institute of Iranian Studies and the American School of Oriental Research. His principal interests are the prehistory of the Near East, the archaeology of Iran and Iraq, the early history of Iran, and ancient demography.*

MANKIND DISCOVERING

The visitor to the new Royal Ontario Museum, after entering the main door and traversing the Rotunda, will see immediately in front of him a double colonnade in the large area–the Currelly gallery–that once housed the Museum's collection of arms and armour. The colonnaded area is the site of what will be known as the Mankind Discovering gallery. It does not look much like a traditional museum gallery–nor will it be; yet, when completed, it will be the key to all the galleries that the visitor will see elsewhere in the building. By pausing and studying this gallery at the outset, he will be enabled to appreciate much more fully and with greater understanding what the other galleries have to communicate to him.

The Mankind Discovering gallery will represent in some ways the culmination of the whole process that has been taking place in the Royal Ontario Museum during the last decade with the avowed purpose of transforming the institution into a museum both for its time and for the future. In the two articles that follow, Dr. Louis D. Levine and Ms. Leslie Patten, two members of the ROM's staff who were both deeply involved in the process at different stages, explain something of the relationship of the Mankind Discovery gallery to the purpose and function of the Museum as a whole.

Finding the Theme

L. D. Levine

> The known is finite, the unknown infinite: intellectually, we stand on an islet in the middle of an illimitable ocean of inexplicability. Our business in every generation is to reclaim a little more land.
>
> T. H. Huxley, 1887

IF there was one single point in time that could be described as pivotal for the Royal Ontario Museum's process of renovation and expansion, that point was the publication of the *Statement of Intent* by the board of trustees in September 1975. The pre-renovation Museum had not been without a plan of a sort. The science departments were arranged so that they told their story vertically, starting with the history of the earth on the first floor (geology and mineralogy), and progressing through the palaeontology galleries on the second floor to the contemporary life sciences on the third. The logic behind the arrangement of the art and archaeology galleries was less transparent. The first floor, for instance, housed a small part of the Far Eastern collection, but the bulk of this collection was on the third floor. European galleries occupied most of the remainder of the first floor, but many European textiles were displayed on the second. The story of the Near East, which began on the second floor, ended in a single gallery on the third.

Such rudimentary attempts as there were at planned arrangement never managed to conceal the fact that the ROM had originally been five separate science and art museums, and that when expansion had last taken place in 1932, it had been "the competing claims and wishes of the (five) directors" that had helped shape the architectural plan (see "Retrospect—The First 75 Years", by Loren A. Oxley, *Rotunda* 15/2, pp. 7–13). Added to all this was the fact that the growth of the staff and the collections between 1932 and 1975 could only

Illustrations on pages 11 (bottom), 12, and 14–18 are reproduced courtesy of Klein & Sears, Architects.

Left: The Palestine gallery as it appeared before closing for renovation in 1980. Right: A view of the Islamic Gallery as it appears today after the reopening.

be accommodated by making use of whatever space could be made available, without much regard for its relationship to other spaces. The resulting haphazardness was enough in itself to determine that the new Museum could never be simply a reinstallation of the old.

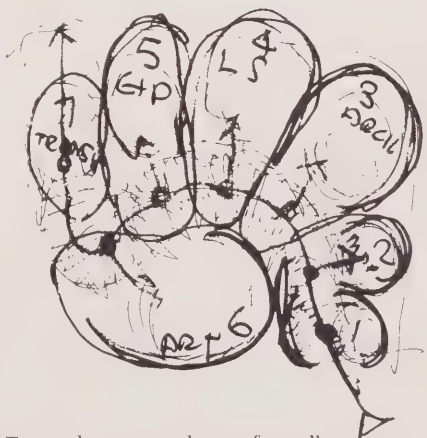
The *Statement of Intent* addressed the problem squarely. It enunciated for the first time a unity of purpose for the Museum as a whole, and expressed it by setting forth the goal of the ROM as "the furtherance of man's greater understanding of himself, his society, and the natural world of which he is a part". Four basic objectives flowed from this statement of purpose. The first three were: to collect; to employ scholars to study and interpret; and to participate in research, field work, and publication. These three objectives could be said to describe the hidden activity of the Museum. The public face of the institution was recognized in the fourth objective: "the interpretation of knowledge through gallery exhibits".

During the decade just prior to the beginning of the ROM's expansion, an important development had taken place in the museum world: a new academic discipline, museology, had begun to take shape. Among its many concerns, and central to them all, is the study of what museums communicate to the public through their exhibits and how they communicate it.

A statement of intent is one thing; the realization of the intent is another. To bridge this gap a Communications Design Team was formed. The result of its work, published in 1976, was the first general overview of museological communication ever published, aptly entitled, *Communicating with the Museum Visitor*. Implicit in this document was the realization that the new public face of the Museum would have to reflect the purpose of the institution, not just its collections. The job of accomplishing this task was given to a group called the Exhibits Communication Task Force. What the ECTF did was to take the goal enunciated in the *Statement of Intent* and, following the principles and methods explicated in *Communicating with the Museum Visitor*, translate it into a detailed plan for allocating and shaping the entire public space of the new Museum.

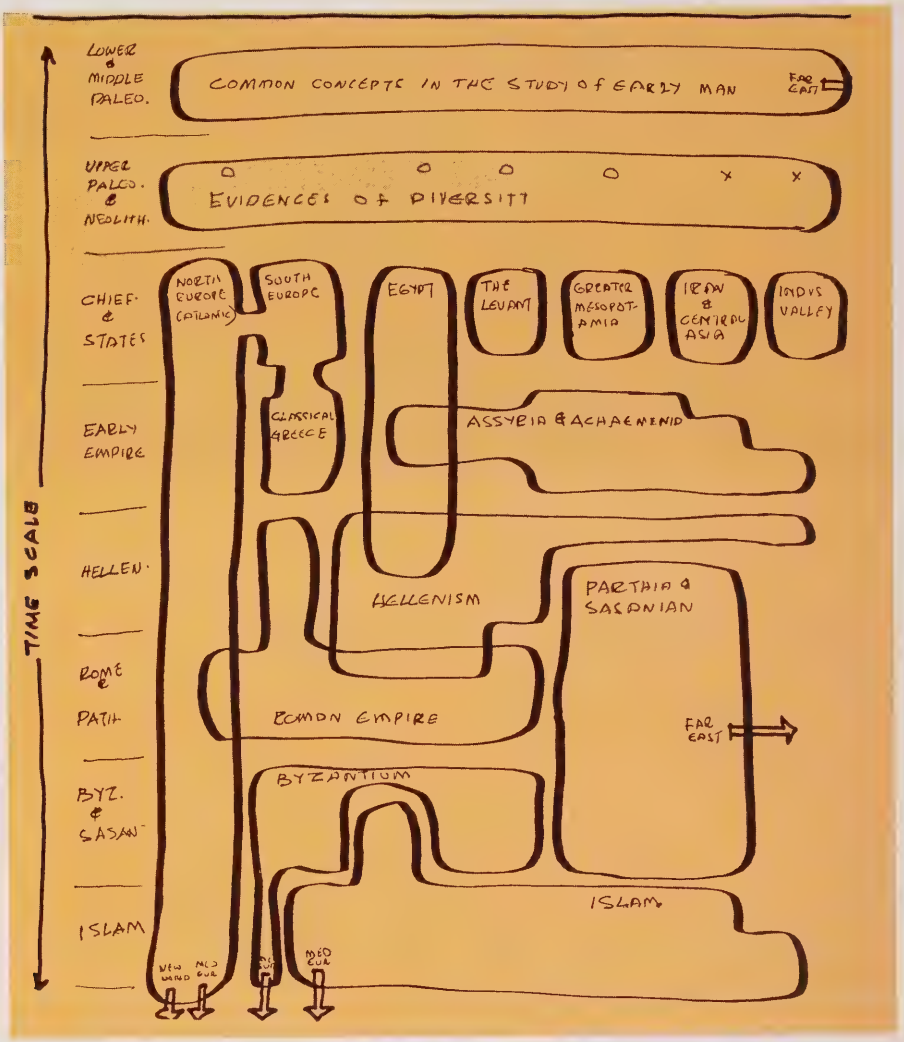
The story of the two years of investigation and deliberation in which the ECTF accomplished this enormous task is a saga in itself that cannot be told here. The ramifications of its mandate seemed unending, the questions to be answered infinite, and at times perhaps impossible of solution. But the task force persevered, and it is not too much to say that its work, crystallized in the two volumes of *Mankind Discovering*, determined the character of the institution for decades to come.

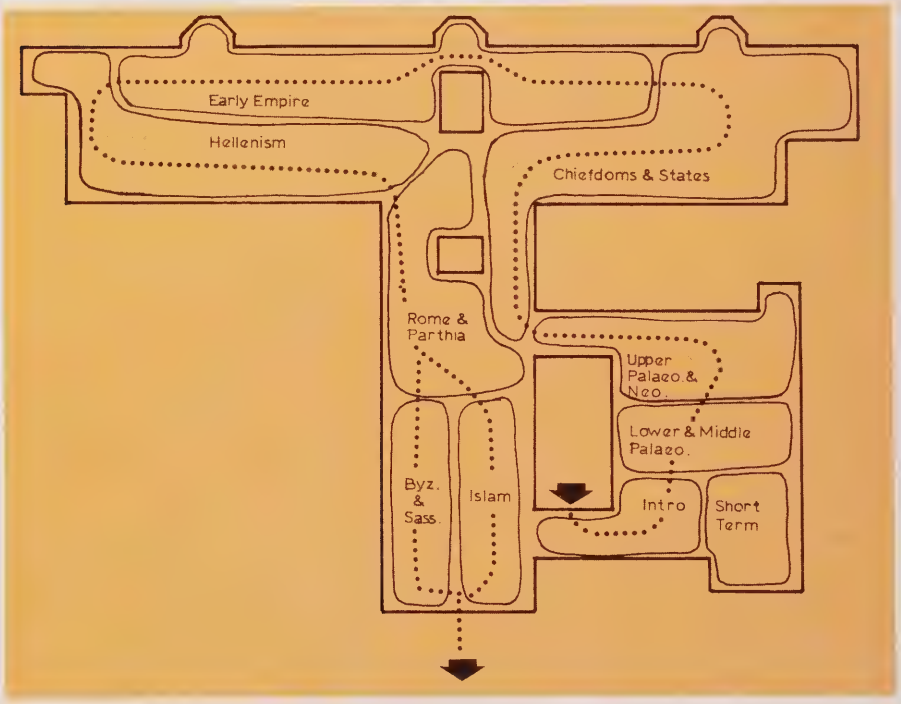
I can remember very vividly the ECTF meeting when everything began to fall into place. One of us went to the blackboard in the small, cramped room we used as both office and meeting-place and began to sketch out a conceptual scheme for linking galleries. In hindsight, it sounds simple; it did not appear so at the beginning. The science departments fell into two groups: life sciences and earth sciences. The palaeontology departments were at home in either group,



Towards a new scheme for gallery arrangements: an early sketch of the "cluster concept".

Applying the cluster concept to specific collections. Above: A preliminary diagram of chronological relationships among the different regions of the Ancient World. Below: Time bands established from the chronological relationships determined the sequence of the sets of galleries and a logical circulation route. Both diagrams are from *Mankind Discovering, Volume I*.





but the curators felt that their links to the life sciences were the stronger. The ancient world and the world of classical antiquity fed into both Islam and the later civilizations of Europe and the New World. The Far Eastern cultures represented a second, independent cultural expression; the Native cultures of the Americas were a third. What began to take shape was not a series of departmental galleries exhibiting in separate, unrelated spaces, but a number of "clusters", each telling a story and each structured around common themes and concerns.

The arrangement of the galleries in ordered clusters was one expression of the new direction that the ROM was taking. Meanwhile, the search was on for another. In the *Statement of Intent* the board of trustees had charged us with responsibility for developing a theme that would "assist the staff and public to see, in better perspective, the larger significance of this great, multi-disciplinary institution and the increasing importance of inter-disciplinary study and cooperation". To this end, one of the first actions of the ECTF had been to set up a Theme Group, whose task was to discover such a unifying theme. The difficulties of this assignment cannot be overstated; it was possible to trivialize the concept so that it had no meaning, or to make it so complex as to defy expression in galleries and exhibits.

The Theme Group started with some suggestions from earlier work done by others, as well as the two mottoes that flank the Museum's main entrance: "The record of nature through countless ages" and "The arts of man through all the years". But for a long time the goal of its deliberations eluded it. Then just when it was about to admit defeat, a last effort proved successful. The group put forward its proposal: the theme for the new Museum was to be "Mankind Discovering".

The statement of the theme brings us back to the quotation from Thomas Huxley that I set down at the head of this story. But it only expressed in succinct form what had already been going on at the ROM for a long time. The growth of cooperation between curatorial departments, the research and analysis, whether of textiles or mites, bats or potsherds, were all part of man's attempt to discover more about himself and his universe. It was the desire to discover that provided the rationale for collecting the art of the ages and specimens from all nature. The value of these collections was that they helped us to understand our small planet and our role on it. They were a means of charting the "illimitable ocean of inexplicability". In announcing its theme, the Museum was, in effect, responding to Huxley's challenge.

When I look back, it becomes clear that "Mankind Discovering" informed the work of the ECTF in two essential ways. For implicit in the theme is the responsibility to share the discoveries with mankind. In a museum the exhibit is the primary vehicle for communication; in the ROM it was the ECTF that established the framework for such exhibits.

The other way in which the ECTF reflected the theme is more subtle, and I think more profound. We came to realize that communicating with the visitor is not accomplished by a set formula. Rather, the development of a Museum-wide plan and of the individual units that go into the plan was an exploratory process that involved the entire ROM staff. The process required the curator, the designer, the exhibit programmer, and the preparator to work in concert defining what was to be said and how to say it, what was to be shown and how to exhibit it. This process, in and of itself, was a new way to define the Museum and its basic objectives; it was, in fact, mankind discovering.

The ECTF's report, *Mankind Discovering*, then, as its very title implies, makes it clear that all efforts thus far are only part of a process; field work, research, and gallery development are ongoing. All demand constant testing and evaluation, all raise new questions and expose new horizons. If our public face is better now than it was in the past, it is certain to be better yet in the future. As we understand more of how people learn, of how to communicate, of how to develop good galleries, the process and the product will improve. "Reclaiming a little more land" is a continuing venture, both academically and in the communication of what we learn.

Louis D. Levine is curator in charge in the ROM's West Asian Department. He received his Ph.D. in Oriental Studies from the University of Pennsylvania, and has published in both ancient Near Eastern history and archaeology. He worked for many seasons on archaeological projects in Iran and directed both the excavations at Seh Gabi and the Mahidasht project there. Dr. Levine was the vice-chairman of the Exhibits Communication Task Force.

The Gallery in the Making

Leslie Patten

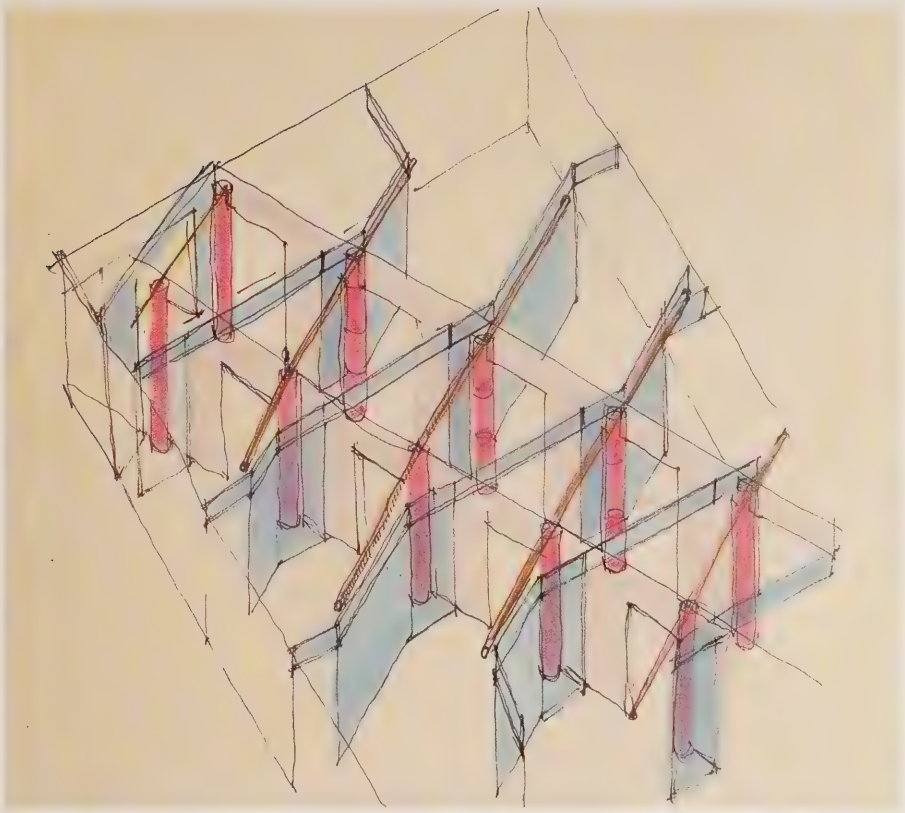
A working session of the Mankind Discovering gallery development team.

THE gallery development team charged with designing the Mankind Discovering gallery first met more than four years ago. The task before us was a daunting one: to design a gallery that would represent not just the collections of a single department or cluster of departments but the work and fundamental purpose of the entire institution.

Before tackling the project, however, we had a formidable problem to surmount—the problem of teamwork. Like other gallery development teams, ours consisted of a chairman, several curators, a designer, a programmer, a teacher, and a conservator. In the method of exhibit design used previously, a curator had directed a sort of assembly-line production of ideas; the ROM's new galleries required a new approach that we would have to devise as we went along. The method was to be that not of the factory but of the laboratory, in which each member of the team contributed as an equal to the experiment in thematic design. As Dr. Levine has observed our own work in illustrating Mankind Discovering was itself to be a process of discovery.

The Mankind Discovering gallery had to serve two purposes: it had to show the Museum in its totality as an expression of mankind's efforts to discover meaning and order in the universe; and it had to provide a precise and compelling introduction to the new and renovated galleries. Somehow these two objectives had to be combined within a single conceptual framework.

The search for this framework produced, in the early stages of our work, three different and completely incompatible approaches. One envisaged the new gallery as a kind of compendium of the Museum's activities presented through a history of the institution itself. A second proposed that we focus on a humble, inarticulate object such as a potsherd and explore its labyrinthine connections with both the natural and the cultural landscapes as a means of entry into the whole world of knowledge and discovery. The third proposal was that the gallery should present only a few exhibits but should use them as examples of the method by which the Museum discovers things about its collections—discovery through conservation, through documentation, through comparison, through analysis, and so on.



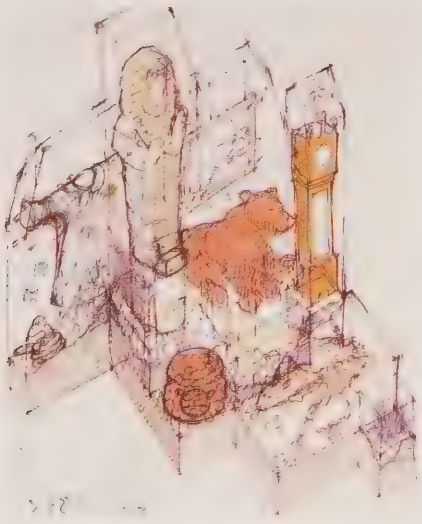
An early sketch of the Analysis section of the gallery. When compared with the structure as it will look when completed, this study shows that the essence of the gallery design process is in the repeated and careful refinement of the initial ideas.

We chose to develop the last of these proposals, but though we worked hard at several of the exhibits, the unifying concept for the gallery still seemed to be missing. Then we realized we had left out an explanation of the Museum's purpose. Though our proposed exhibits would have illustrated many areas of the Museum's work that the public rarely sees, they would not, except by the vaguest implication, have explained *why* the Museum engages in these activities.

Once we started to rethink our task with our eyes more closely fixed on the purpose of what we were doing, a much more precisely defined conceptual framework quickly emerged: the process of discovery as represented by the research work of the Museum. We now had a unifying structure that enabled us to highlight specific examples of ROM research as part of the human enterprise of discovery.

In structuring the gallery to reflect the Museum's research, we needed a brief introduction and then four parts describing the main stages of the process: background, field work, analysis, and synthesis. Of course, the research process is far less linear than this description suggests: the various stages often overlap. But for the purposes of the gallery the simplification was serviceable. Within this framework we could provide an inside view of the Museum at work—in the field, in the lab, and in the study room—and, so we hoped, replace the traditional image of museums as dusty mausoleums with one that would show the ROM as a place of vital and relevant activity.

In the summer of 1980 we interviewed all curatorial departments about their work, asking them to describe both what they discovered and how they discovered it. The answers to these questions proved fascinating, as did many of the circumstantial details—descriptions of the machinations required to obtain permits and fuel for a dig in the Sudan, and hilarious accounts of dead and reeking mynah birds being carried out of India in suitcases. Equally interesting were the explanations of analysis back in the labs—the filming of tiny water mites to discover their swimming techniques, and the rigorous procedures for determining the age of ancient rocks by the use of radioactive isotopes. From these inter-



The exhibit that will stand at the entrance to the Mankind Discovering gallery was conceived to symbolize the collections at the heart of the ROM's research. Shown here, a concept drawing for the focal exhibit.

views we created, during the next two years, the exhibits to illustrate the four main steps of the research process.

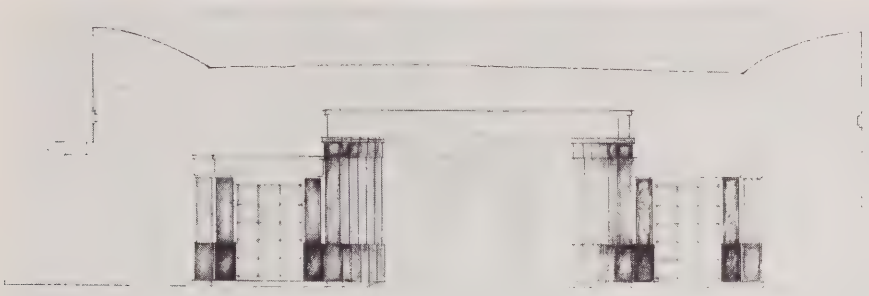
The design process we adopted placed emphasis on the careful structuring, at an early stage, of the ideas to be expressed in the galleries. This interest in what has come to be known as information design sprang from the conviction that exhibits should be more than just a feast for the eye; they should also be agents of learning. Surveys have shown that most people visit museums with the express intention of adding to their knowledge. Until recently, the fulfilment of this intention generally required stamina and a good deal of prior information, since the historical or theoretical framework of an exhibit was usually only implicit and had to be extracted by the visitor himself to provide a context for the information contained in the labels.

The object of information design—a comparatively new and still largely experimental science—is to assist the viewer to learn on his own, right in the gallery while viewing the exhibits. This does not mean that the exhibits must be aggressively didactic; it does mean, however, that opportunities for the viewer to introduce himself to a subject must be provided as an integral part of the exhibit itself, not, as formerly, on some separate and easily disregarded theme panel. The premise is that ideas fundamental to understanding an exhibit must be unfolded logically a few at a time, with the exhibit itself expressing and illustrating them at critical points.

Our experiments with information design led us to fashion a new working tool, which we called a communication plan. In this we transformed our conceptual framework—the research process—into a sequence of ideas crucial to an understanding of how the process works. This was not merely a storyline describing what we wanted to communicate. Rather, it identified which ideas in what order were fundamental to an understanding of the gallery, and told us what the key exhibits for each component had to convey if our design was to be successful.

By the end of this stage of the design process the Mankind Discovering gallery had taken shape. We had a floorplan that fixed the relationships among the components and defined the visitor's route through the gallery. The plans for the enclosing architecture were nearly complete, and most of the exhibits had been sketched out in sufficient detail to show their proposed structure and appearance. Since our physical design required viewers to see the whole exhibit, we felt it was necessary to offer them a choice within each component part. Accordingly, we developed a selection of exhibits to illustrate each major stage of

An isometric study of the entire gallery design late in its evolution. Isometric diagrams allow members of a development team to get an idea of how a proposed design will look, and enable them to make critical judgements about the design's effectiveness.



Front elevation of the gallery architecture late in its evolution. Elevations, like isometric diagrams, are working tools in the development process.

research at the ROM, and interpreted the process at several levels from the introductory to the detailed.

The first main component of the gallery, after the introductory section, is Background Work, designed to evoke the bookish atmosphere of study. It represents the first step in the process of discovery: the posing of a question and the formulation of a hypothesis. Questions and hypotheses from ROM research projects are used as illustrations.

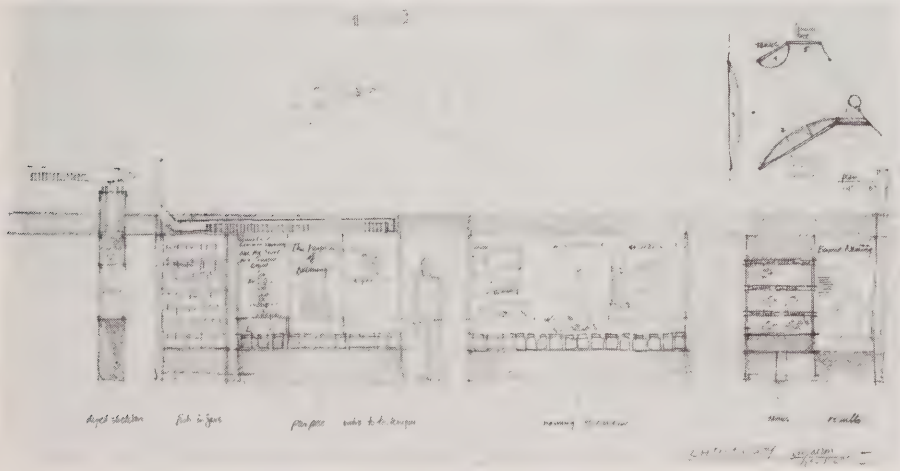
Field Work is a more complex component. This stage has to be shown as a method of gathering evidence for answering questions and testing hypotheses, but different disciplines go about the task in different ways. We studied all the methods and arranged them in five groups, according to field "style": life sciences, earth and palaeo sciences, archaeology, art history, and ethnology and textiles. We defined each style with the aid of large photos and used both objects and field equipment to explain the different methods. Artifacts and specimens had to be presented in the state in which they are found in the field to help create the right atmosphere. Without investing field work with a deceptive glamour, we aimed for drama with a minimum of words.

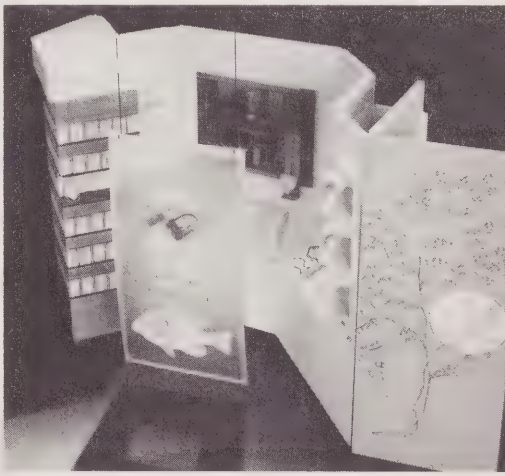
Analysis, by contrast, was conceived as a highly structured, didactic component. It had to show how materials collected in the field are made to yield further information. Four or five representative techniques will be demonstrated at any one time. Visitors will be encouraged to choose an illustration, study the purpose and methods of the research represented, and see the results. Artifacts and specimens again have the starring roles: tools and equipment help to illustrate the methods.

The stage of Synthesis represented the biggest design challenge. This final component had to show the climax of the whole process, those rare occasions when facts, objects, hypotheses, and observations all come together to yield new insights into the workings of things. The design of this component is still partly in the experimental stage.

Illustrations of ROM research findings will be shown in the courtyard space as a concluding demonstration of synthesis. These will be changed periodically so

Drawing and model studies of one of the exhibits in the Analysis section of the gallery. This exhibit, called "How Do I Name This Fish?" illustrates how curators in the life sciences departments analyze characteristics of an organism to classify it and to give it a name that reflects its evolutionary relationships with other organisms.





Above: Plan of the Mankind Discovering gallery as it will be built.

Right: Testing the design: a full-scale cardboard and plywood mock-up was used to test the design's ability to direct visitors to enter the gallery on the left. It also allowed the development team and ROM staff to review the proportions and details of the architecture.

that there will always be something new for returning visitors. In addition, the work that supports the curatorial endeavour—conservation, publication, exhibit design, and the rest—will also be included, since without this support some discoveries might never be made at all, and none would be as widely and as effectively communicated.

Throughout the development of the gallery the team evaluated and tested its ideas. The ROM is one of the very few museums that test exhibits before they go into final production to see if they have accomplished their objectives. The first testing of the design of Mankind Discovering took place in the spring of 1982 with the aid of a full-scale cardboard and plywood mock-up. Errors in judgement were corrected and refinements in design effected at this stage far more easily and less expensively than would have been possible if we had waited until the gallery was completed before testing our design.

Not all the component exhibits of the gallery have yet been completed. The gallery will open in sections over a period of several months, each component being tested as we go, and the public will be invited to participate in the evaluation at several stages. As a result of this testing and evaluation, we are confident that Mankind Discovering will provide an elegant counterpoise to the Currelly gallery, a blending of old and new that will honour the Museum's tradition while announcing its new character.

Leslie Patten has been with the ROM's Exhibit Design Services for the past four years. Her credits include work on the Mankind Discovering gallery, the East Asia galleries, Arthropods, and for the past two years the exhibition Silk Roads/China Ships. She obtained her Master's degree in Museum Studies from the University of Toronto in 1979, specializing in exhibit design.

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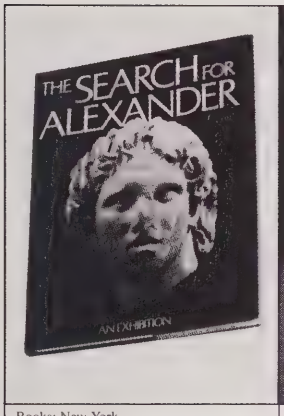

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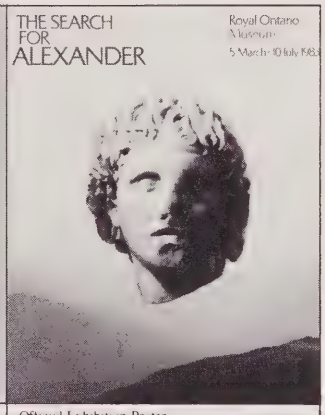

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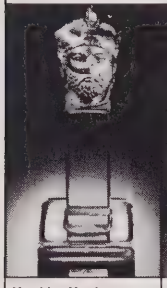

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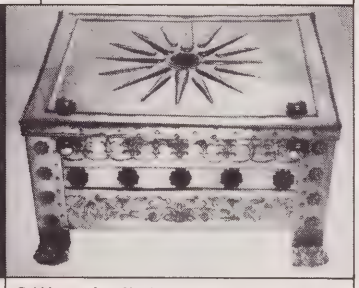

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Exhibition at the Royal Ontario Museum March 5–July 10, 1983

The Islamic Gallery

Lisa Golombek
Curator
West Asian Department

A reconstruction of the courtyard of an Islamic house with a mosaic marble fountain. In the background is a "domestic interior" housing two manikins in Palestinian costume.

IN the layout planned for the Mediterranean cluster of galleries, the Islamic exhibits were necessarily placed at the end, to correspond with their chronological position in the period represented. At first the planners—the late Dr. Veronika Gervers, Dr. Ed Keall, and I—saw this as a disadvantage; we felt that our prized possessions would scarcely be noticed by the average visitor. Dazed and exhausted by his journey through millennia of pre-history, Egypt and its mummies, Rome and its statues, would he have the patience to read yet another label, contemplate yet another pot?

Then it occurred to us that a dramatic change in the traditional display at this point just might alleviate the anticipated museum-fatigue. Why not create an Islamic environment? Much of what would have gone into labels could be communicated through an architectural setting. In 1980, as we began to formulate our ideas, Louise Mackie joined the team to furnish the setting with appropriate textiles, rugs, and costumed manikins.

Just as an Islamic city is composed of three major elements—the residential, the commercial, and the religious—so our townsite would include a typical middle-class house, a bazaar, and a mosque and shrine, designed to dovetail, just as they do in reality. In this way we were able to create a variety of different spatial configurations in a very limited space.

The visitor enters the world of Islam from the late Roman empire. The conversion of the territories of the Eastern Roman Empire to Islam is marked by an

inscribed stone, first used in a Christian context as shown by the cross, and then re-used by Islam as indicated by the Arabic script on the reverse. This stone divides the Coptic Egyptian textiles from the introductory case for Islam.

Here, on textiles, coins, ceramics, and in the Quran, the holy book of Islam, the visitor sees the dominant theme of the Islamic arts, Arabic script. The cases display a few of the vast collection of archaeological textiles from the 9th to the 14th centuries.

The next space, which is the entrance to the townsite, contains a shrine, complete with silver inlaid brass candlesticks and tapers illuminating the grave cover of a descendant of the family of the Prophet. The keel-shaped arches are intended to suggest the central aisle of a mosque, with a *mihrab* (prayer niche) at the end. Because the Museum does not own a *mihrab*, a fine prayer carpet hangs here.

From the mosque can be seen the open courtyard of the house with its beautiful mosaic marble fountain, fed by a circulating pump. The fountain, a copy of an 18th-century original, was made for the Islamic gallery in Damascus. To one side of the courtyard is the domestic interior, at present housing two female manikins dressed in Palestinian costume who are placing an infant in a cradle. The fine workmanship of the *mashrabiyya* (wooden grille) window in the side wall can be studied in the passageway outside.

Opposite the domestic interior, the visitor may sit at a case containing illustrated books, a setting that is intended to convey a sense of the privacy and intimacy of reading. Outside the house, the theme of the garden in myth and reality is alluded to in the Persian picnic scene above the arch and in the floral decoration on the Turkish tiles.

Next, the visitor moves down the corridor towards a photographic enlargement of an archway and passes under a similar arch to find himself in a bazaar. Here the atmosphere is very different from that of the private house or mosque. The three shops—pottery, metalwork, felt-making—realistically suggest the dust and disorder of an artisan's workshop. Pottery lamps, just arrived for sale, are stacked in an old donkey saddlebag. The felt-maker, dressed in traditional garb, sits carding his wool. In these shops are placed objects for daily use, which underwent little change over the centuries. The more outstanding pieces have been placed in the case opposite the pottery shop, the art shop.

The ROM designer worked out the dimensions of the individual rooms in accordance with the geometric principles of design used by Islamic architects. The

Aspects of the Islamic world: a photographic reproduction of a street scene; textiles; and, through the arches at right, illustrated books.

arches, also drawn according to those formulas, are typical of the styles found in various Islamic countries. The pointed arches in the mosque are Egyptian, those of the courtyard and shops are Persian, and the entrance to the bazaar is North African, or "Moorish".

Certain objects in the collection required special spaces. The contour of the arches formed by the Persian tiles determined the profile of the arch below; because it has not two but three curves, the gallery draughtsman had to use the traditional methods of the medieval architect, making a long string serve as an extended compass.

Other constraints were imposed by the textiles. We had hoped to drape the interior settings with items from Museum collections, but many old textiles cannot withstand that kind of strain. We therefore designed a cabinet for the walls which makes a rigidly mounted curtain appear to be draped.

As our planning proceeded, we found we could use more and more objects that could never have been placed in a traditional museum display: an 18th-century inlaid ivory chest and cradle, Turkish cushion covers, a large grave cover, carpets, a long mosaic faience panel, and several large wooden *mashrabiyya*. Many of these objects required months of restoration work by the Conservation Department.

One further component remains for the future. On the bridge connecting the old and new buildings of the Museum will be created a Persian garden, complete with trees and flowers, and, at last, a place to sit.

The Ming Tomb Gallery

James Hsu
Associate Curator
Far Eastern Department

THE entire Ming tomb gallery, scheduled to open in the summer 1983, will be devoted to Chinese funerary works of various kinds. Many of these objects, such as the clay models of people, buildings, and implements placed in a tomb for the convenience or happiness of its occupant, will give the viewer a vivid picture of aspects of the life of a high-ranking 17th-century family.

In Ming and Ch'ing times death provided the occasion for the most solemn and elaborate rituals. No sum of money, however great, was considered excessive when it came to honouring the dead and assuaging the grief of the surviving relatives. The funeral also provided a most fitting occasion for proclaiming the social standing of the deceased and his clan.

The practice of burying precious objects with the dead has existed in China for thousands of years. Large halls were built over tombs as early as Shang times, over 3000 years ago; serving as permanent memorials to the dead, these edifices also were used for the rites and ceremonies involved in ancestor worship. By early Han times (2nd century B.C.) commoners often used models as substitutes for such halls, and the aristocracy had begun to place huge statues in front of their tombs to indicate the exalted status of their deceased.

Such large stone sculptures, together with the actual tomb, constitute the focal point of the exhibition in the terrace gallery. The carved figures, originally placed along an avenue called the "spirit way" leading to the tomb, were previously located in the Museum garden but have been moved inside to protect them from further deterioration by the weather and the car exhaust fumes. The tomb was that of General Tsu Ta-shou, a Ming general who died in A.D. 1654 early in the Ch'ing Dynasty. (His interesting and colourful career has been described by Barry Till in "A Chinese General's Tomb", *Rotunda* 14/1, pp. 6–11.)

According to Ming law a general of the first rank was entitled to have outside his tomb statues of two people—one civilian official and one military officer—and pairs of stone sheep, tigers, and horses, as well as two large pillars. As the visitor will see, two stone camels also guarded the General's spirit way, yet in Ming times only members of the royal house were permitted to place camels outside their tombs. Presumably the General's family was able to exceed its entitlement because the succeeding dynasty had not yet promulgated laws governing such matters.

BILL ROBERTSON, ROM

Stone arches and figures originally placed along an avenue called the "spirit way" leading to the tomb of a Ming general.

In Ming times there also were strict rules governing the size of house compounds and other buildings that persons of different classes and ranks could own. The pottery model of a noble house on display in the gallery is the largest, best-preserved house model yet discovered. It has the characteristic three courtyards, two-storey front hall, red-painted structures with green-glazed roof tiles, and gold-painted front doors of the residence of a duke or marquis. The original front doors would have had door-knockers with animal mask decorations, but these have disappeared. A model of a royal palace would have been even more impressive, but palaces were depicted in reliefs on the walls of tomb chambers, rather than in clay models.

Other objects commonly found at burial sites, also to be displayed in the gallery, are models of things enjoyed or owned by people during their lives: the houses they lived in, servants, furniture, and even animal enclosures. The front display case will contain a model of a funeral procession, a ceramic entourage to which only an official was entitled. Of course, the size and composition of the procession varied according to the rank of the deceased; only high-ranking officials were entitled to a military band and mounted guards. The procession on display would have been appropriate for an official of the first rank such as General Tsu himself.

Models of things people enjoyed or owned during their lives are commonly found at 17th-century Chinese burial sites. Pictured here is a painted and glazed pottery model of a Chinese courtyard house of the type that might have housed a Ming prince or duke, his extended family, and servants.

1. Eilean Donan Castle, Scotland, dates from 1220. 2. Lincoln's magnificent Gothic cathedral looms over cobbled streets and crooked cottages. London, from Westminster Bridge. 5. The Philharmonic, Liverpool—one of Britain's many Victorian pubs. 6. A favourite way to meet friendly at the Battle of Trafalgar, HMS Victory, lies in peace at Portsmouth. 9. Stop for tea at a centuries-old stone cottage: home-made scones and

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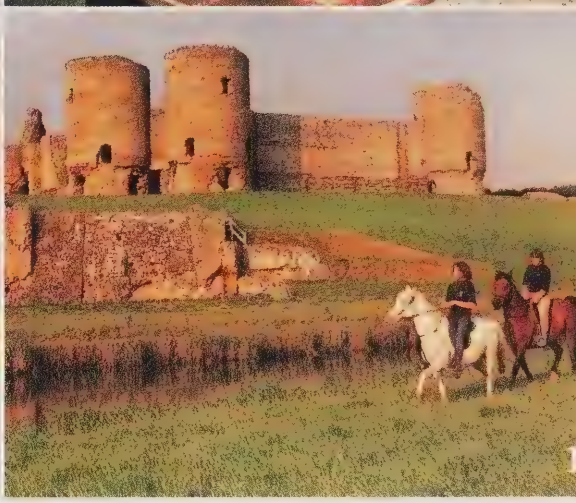

3. Durdle Door, on the Dorset Coast: land of Tess of the D'Urbervilles and the French Lieutenant's Woman. 4. The Houses of Parliament, Britons in their own homes: bed and breakfast. 7. 'They're changing guard at Buckingham Palace'. 8. Hearts of oak...Lord Nelson's flagship jam, with clotted cream. 10. Rhuddlan Castle, in Wales, no longer rings with the crash of cannon and the zing of arrows.

diverse and fascinating. They include open-air productions of Shakespeare, numerous medieval banquets and, of course, no Welsh festival would be complete without choral concerts throughout the season.

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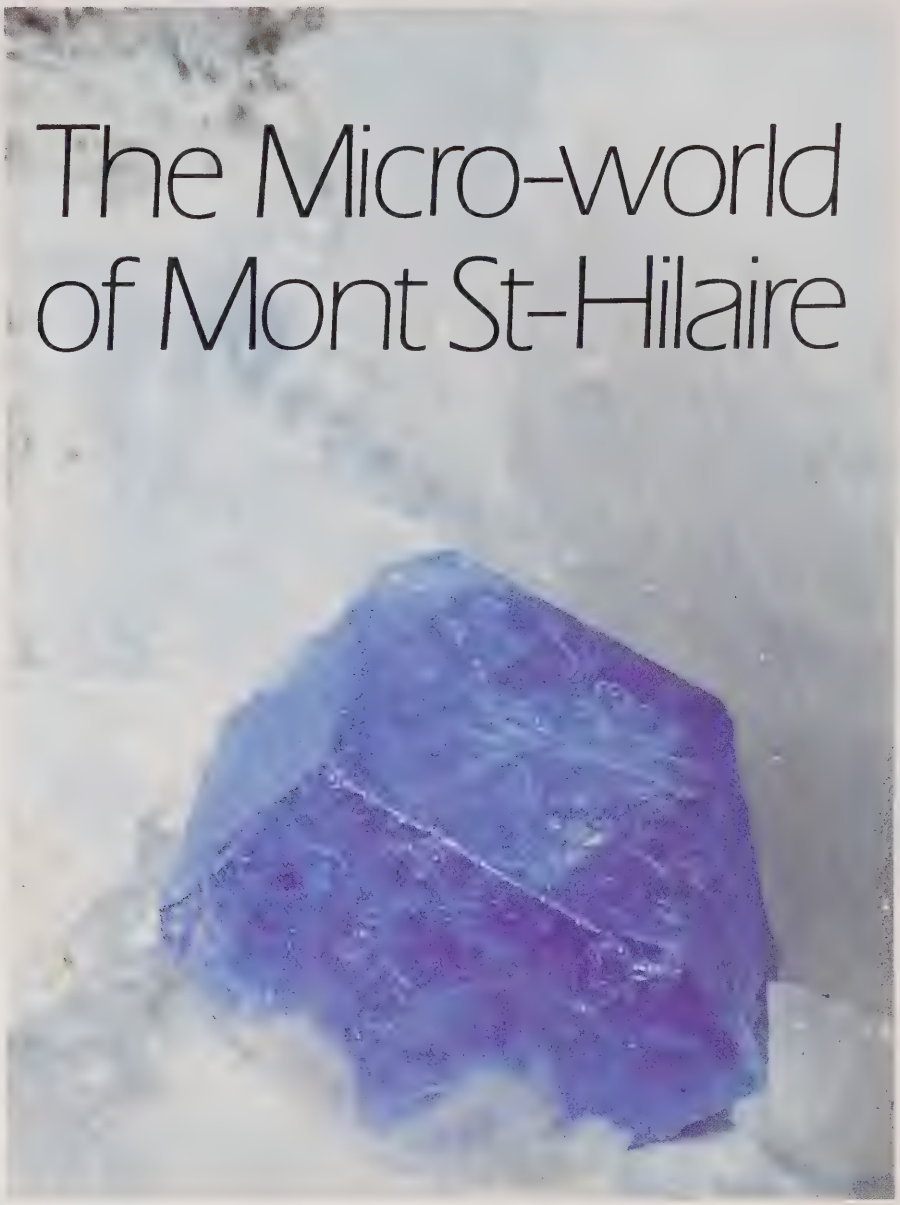
The Micro-world of Mont St-Hilaire

J. A. Mandarino



Sodalite. Occurring in many parts of the world, sodalite is especially well known from the Bancroft, Ontario area. It is seldom found as crystals and this well-formed, 13-mm-diameter crystal makes this ROM specimen extremely unusual. Sodalite crystallizes in the cubic system and is a sodium, aluminum, chloro-silicate.

MONT St-Hilaire in Quebec is the site of two quarries that produce crushed rock for the building and road-paving industries. But for the mineralogist the quarries produce a more important and valuable commodity—a host of minerals, many of them rare. Over 150 known mineral species, some of which are unique to the site, have been recorded from Mont St-Hilaire. In addition, there are about two dozen species that have not yet been identified; some of these may be species new to science.

Mont St-Hilaire, one of the Monteregian Hills, lies about 30 km east of Montreal. Not only are rare species found at this locality, but many of them contain some of the rarer chemical elements such as beryllium, rare earths, niobium, titanium, and zirconium. The presence of these rare elements is the result of a molten rock mass or magma which, approximately ninety million years ago, reacted with the older shales and limestone through which it was slowly forced. When the magma cooled, cracks and cavities formed in it; within these cavities can be found a variety of micro-crystals.

The mineralogical treasure trove brought to light by the quarrying operations has attracted both professional mineralogists and amateur collectors. The collector carefully investigates every cavity with a hand lens and takes the more

promising chunks of rock home for careful scrutiny through a microscope. Many collectors specialize in micro-mounts, specimens that contain very small but well-formed crystals which can be seen to advantage only through a microscope. Two such collectors, Mr. and Mrs. Ross Anderson of Toronto, have made numerous trips to the mountain and have transferred significant portions of it to their basement. Not content with just looking at these microscopic crystals, Mrs. Violet Anderson began to photograph them so that she could show others the beauty that she and her husband saw through their microscopes.

Some of her photographs are reproduced in the following pages.

Astrophyllite. This triclinic crystal of astrophyllite is about 2 1/2 mm high. A silicate of potassium, sodium, iron, manganese, and titanium with hydroxyl, astrophyllite is widespread at Mont St-Hilaire. This crystal with its red internal reflections if from the Mrs. Cynthia Peat Collection, Toronto.

Monteregianite. A species found only at Mont St-Hilaire has been named monteregianite for the Monteregian Hills, of which the mountain is one. The mineral is orthorhombic and is a hydrated sodium, potassium, yttrium, calcium silicate. The largest crystal in this group is about 2 1/2 mm long. From the collection of Mr. and Mrs. L. Horvath, Ste-Julie, Quebec.

Serandite. The discovery of serandite, a sodium, manganese, calcium, hydroxy-silicate, at Mont St-Hilaire in the early 1960s sparked mineralogists' and collectors' interest in the locality. Before its discovery there, serandite was known only as small, irregular grains from Isle de Los, off the coast of Guinea. This triclinic crystal of serandite is about 2 mm long. From the Horvath Collection.

Garnet. At least three different kinds of garnet occur at Mont St-Hilaire. This 2-mm-diameter crystal probably is grossular, a calcium, aluminum silicate which crystallizes in the cubic system. The particular form shown on this crystal is the trapezohedron. From the L. Lachapelle Collection, Toronto.

Burbankite is a rare carbonate of sodium, calcium, strontium, barium, and rare earth elements. As shown in this photograph, it crystallizes in the hexagonal system. This crystal is about 1 mm long. From the collection of Col. and Mrs. Q. Wight, Ottawa.

Rhabdophane. Bearing a striking resemblance to safety matches, these objects are crystals of rhabdophane, a rare hydrated phosphate of rare earth elements which crystallizes in the hexagonal system. The strange appearance is caused by the presence of overgrowths of different material on the ends of the rhabdophane crystals, the tallest of which is about 2/3 mm. From the collection of Mr. and Mrs. Ross Anderson.

Lemoynite. Another species found only at Mont St-Hilaire is lemoynite. Although it belongs in the monoclinic crystal system, it does not occur as well-formed single crystals, but forms radiating groups such as those shown in this photograph. The vertical dimension here is about 14 mm. A hydrated sodium, potassium, calcium, zirconium silicate, lemoynite is named for Charles Lemoyne (1625–1685), lord of Longueuil and his sons, all well known in French-Canadian history. From the Henry Budgen Collection, Montreal.

Pyrophanite and Cordylite. Two important minerals appear in this photograph: the red mineral on the left is pyrophanite, a rare manganese, titanium oxide; the yellow crystal is cordylite, a barium, rare earth fluo-carbonate. Both minerals crystallize in the hexagonal system and are frequently found together at Mont St-Hilaire. The combined width of the two crystals is about 1 1/4 mm. From the Mrs. Cynthia Peat Collection, Toronto.

Dr. J. A. Mandarino has been with the ROM *since 1959, and was head of the Department of Mineralogy from 1963 to 1980. On 1 January 1983 he became chairman of the Commission on New Minerals and Mineral Names of the International Mineralogical Association. In addition to research and teaching, Dr. Mandarino is writing a book with Mrs. Violet Anderson on the mineralogy of Mont St-Hilaire. His main mineralogical interests are systematic and descriptive mineralogy, crystallography, and crystal optics.*

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The Sincerest Form of Flattery

17th-century French etchings of the battles of Alexander the Great

K. Corey Keeble

IN the post-classical world the historical Alexander the Great was gradually replaced by a quasi-legendary being, the cumulative invention of generations of story-tellers and poets. Vivid accounts of Alexander were given by the Arabs and were assimilated into the body of romantic fable that became an integral part of the European literature of the Middle Ages. For medieval Europe, Alexander was a pagan prototype of the chivalric hero, forerunner of Arthur, Charlemagne, and Godefroy de Bouillon, who were also converted into the semi-fantastical denizens of a mythical golden age of romance and adventure.

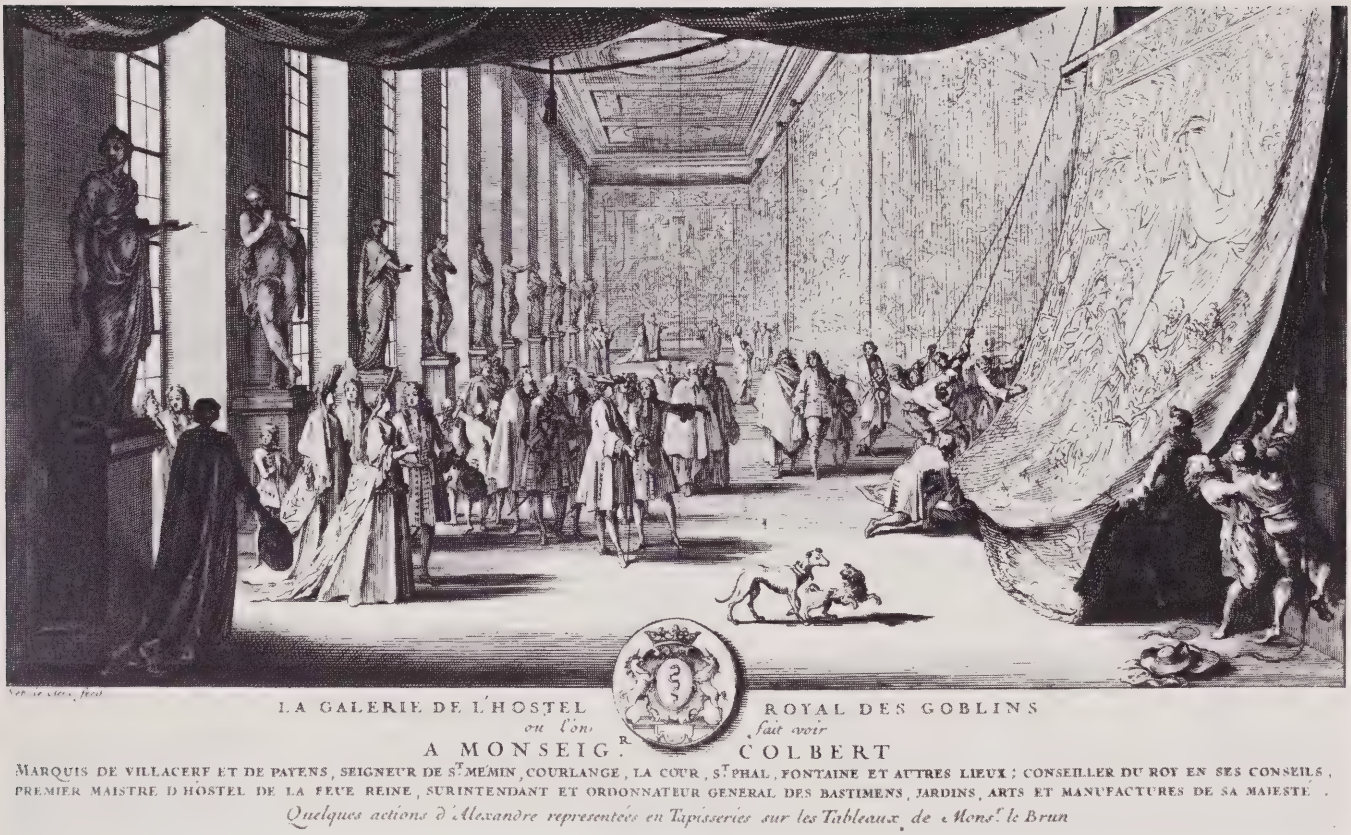
By the 14th century, legends concerning Alexander were so well known in Europe that the monk in Chaucer's *Canterbury Tales* could comment:

> The storie of Alisaundre is so commune
> That every wight that hath discrecioun
> Hath herd somwhat or al of his fortune . . .
>
> . . . he was of knyghthood and of fredom flour;
> Fortune hym made the heir of hire honour.

His fame was celebrated not only in literature, but in the visual arts as well. Fourteenth-century manuscripts showed him here as an inquisitive monarch being lowered into the sea in a glass barrel to witness the wonders of the deep, there as a bold military commander riding into battle, clad, not as a general of the 4th century B.C., but as an armoured, lance-bearing medieval knight.

In the palace of the aristocratic and pleasure-loving Duke Jean de Berri at Bourges, an elaborate sculptured fireplace with depictions of the heroes of past ages included a figure of Alexander the Great. He was also represented with the same heroes on a fabulous salt cellar recorded in the 1401 inventory of the duke's possessions.

Most imposing of all medieval representations of Alexander the Great were


LA GALERIE DE L'HOSTEL ROYAL DES GOBLINS
ou l'on fait voir
A MONSEIG.R COLBERT
MARQUIS DE VILLACERF ET DE PAYENS, SEIGNEUR DE ST MEMIN, COURLANGE, LA COUR, ST PHAL, FONTAINE ET AUTRES LIEUX; CONSEILLER DU ROY EN SES CONSEILS, PREMIER MAISTRE D'HOSTEL DE LA FEUE REINE, SURINTENDANT ET ORDONNATEUR GENERAL DES BASTIMENS, JARDINS, ARTS ET MANUFACTURES DE SA MAIESTÉ.
Quelques actions d'Alexandre representées en Tapisseries sur les Tableaux de Mons.r le Brun

those in tapestry. These were the beginnings of the tapestry cycles of his life that were to be developed further in Renaissance and Baroque art. Jean de Berri owned a set of tapestries woven in the 1380s that included Alexander among other representations of heroic figures of past ages. In the 15th century, tapestries with Alexander subjects were among those woven by Flemish weavers for the court of the dukes of Burgundy. Their purposes were multiple: tapestries provided warmth, both artistic—through their brilliant colours—and literal, for the vast interiors of the great halls of medieval castles. In addition they were a reflection of the wealth, power, prestige, and taste of their owners, and their subject matter, as a metaphor for the achievements of the patrons who had commissioned them, served a conspicuous propaganda purpose. By implication, the dukes of Burgundy—Philip the Good and Charles the Bold—were the Alexanders of their own age, whose fame was meant to bear comparison with the greatest glories of the past.

Future rulers were quick to appreciate the advantages of proclaiming themselves the equals of the greatest conquerors and kings of antiquity, and no one made better use of this opportunity for self-aggrandizement than Louis XIV of France. Depictions of Alexander the Great formed a conspicuous part of the artistic commissions at the court of the Sun King. Their function—to invite comparison between Alexander's triumphs in the ancient world and the glory of French absolutism established by Louis's reign—was clear for all to see.

Louis XIV's identification with Alexander was revealed in works of sculpture, painting, and tapestry. In sculpture, Pierre Puget carved an equestrian group with the king in the guise of Alexander, but the most puissant and monumental imagery derived from Alexander's career for the glorification of the monarchy was attributable to Charles Lebrun (1619–1690), director of the royal workshops known as the Gobelins and *premier peintre* to the king. Once appointed to the Gobelins by the king's minister, Colbert, Lebrun became the virtual dictator of the arts in France. In 1661 he received his first royal commission for a painting; the subject was an incident from the history of Alexander variously known

Fig. 1: Sébastien Leclerc's etching showing a set of Charles Lebrun's Alexander the Great tapestries being hung for viewing in the gallery of the Gobelins workshop.

as *The Tent of Darius* or *The Family of Darius Before Alexander*. It was a great success, so much so that Lebrun was commissioned to paint four more Alexander scenes. Their scale was enormous; three of them were over twelve metres in length. They were in the grand manner of Baroque art, but with a gravity and reserve appropriate to a secular court.

Lebrun's Alexander cycle established his reputation, and the paintings were chosen for duplication in the form of tapestries to be woven at the Gobelins. The popularity of the tapestries was demonstrated by their being rewoven in no fewer than eight copies, while further copies were made later in the tapestry workshops of Aubusson, Brussels, and Munich.

Lebrun's subjects were reproduced also in the form of etchings and engravings. Among the best known are those by Sebastien Leclerc (1637–1714), first published in France in 1696, three years after Leclerc had been appointed engraver to the king. Leclerc was one of the foremost graphic artists of the reign of Louis XIV, and one of the most productive. His etchings of Lebrun's Alexander tapestries include faithful copies of the five subjects, with the addition of a sixth which shows a set of the tapestries being mounted for view (Fig. 1).

The etching of the mounting of the tapestries depicts the interior of the Gobelins. The figures constitute a fascinating record of late 17th-century fashionable dress, with the women in the foreground depicted wearing *fontange*, a headdress of the type popular in the 1690s. At the left of the gallery in which the tapestries are being hung are numerous statues on pedestals. They are after the antique, and include, fourth from the left, a Venus Pudica of the type represented by the Venus de'Medici of the Uffizi Galleries.

The tapestries, on the right, are clearly recognizable. At the very end of the gallery is *The Triumph of Alexander*, showing his entry into Babylon. In the right foreground, workmen straining at ropes hoist into position a tapestry of *The Family of Darius Before Alexander*.

Leclerc's first etching of the Alexander series serves as an admirable introduction to the five subjects, and establishes for the viewer a scale for gauging the proportions of the original tapestries on which the etchings are based. It and the

LA VERTU SURMONTE TOUT OBSTACLE.
Alexandre ayant passé le Granique, attaque les Perses à forces inégales, et met en fuite leur innombrable multitude.
VIRTUS OMNI OBICE MAJOR.
Alexander superato Granico, Persas impariibus copus aggreditur eorumque innumerabilem exercitum fundit

Fig. 2: *The passage of the Granicus*

LA VERTU PLAIST QUOY QUE VAINCUE.

Alexandre ce n'est pas seulement touché de compassion en voyant la grandeur d'Ame du Roy Porus qu'il a vaincu et fait son prisonnier, mais il luy donne des marques honorables de son estime en le recevant au nombre de ses amis, et en luy donnant vne plus grand Royaume que celuy qu'il avoit perdu.

SIC VIRTUS ET VICTA PLACET.

Porì Regis victi, captique magnanimitatem non misericordia mod. sed honore prosequatur Alexander illumque in amicorum numerum recepit, mox donat ampliore regno

LA VERTU EST DIGNE DE L'EMPIRE DU MONDE.

Alexandre apres plusieurs victoires desfit Darius dans la bataille qu'il donna pres d'Arbelle, et ce dernier combat ayant achevé de renverser le throne des Perses, tout l'Orient fut soumis a la puissance des Macedoniens.

DIGNA ORBIS IMPERIO VIRTUS.

Post multas victorias virtute sua partas ultimo ad Arbellam prælio Darium fugat Alexander eaque clade funditus everså Persarum fortunâ totus Orient in potestatem Macedonici cessit Imperii

other etchings of the series also include a reminder of the importance of Colbert in the commissioning of the Alexander tapestries: his coat of arms with a serpent—an appropriate badge for a minister of finance—appears on the lower part of the page.

Chronologically, the first of Leclerc's Alexander etchings depicts Alexander, having crossed the River Granicus, attacking a Persian army larger than his own and putting it to flight (Fig. 2). The composition faithfully records Lebrun's original, with its obvious influences from Giulio Romano and Poussin.

The second subject (Fig. 3) concerns Alexander's compassion for a van-

Fig. 3: (above) *The wounded Porus*

Fig. 4: (below) *The battle of Arbela*

Fig. 5: *The tent of Darius*

quished foe, King Porus, while the third (Fig. 4) deals with Alexander's defeat of the Persian ruler Darius in battle near Arbela. As is typical of the battle scenes of Lebrun's tapestries, several scenes or incidents are conflated and presented in a manner reminiscent of the convention of continuous narrative adopted by medieval artists in history scenes, a convention also employed in the tapestry precursors of Lebrun's Baroque designs.

The next subject—the family of Darius pleading for clemency from Alexander (Fig. 5)—was the longest lived of Lebrun's designs, since it derives from the painting he did for Louis XIV in 1661. Like the other designs, its classicism is more apparent than real, since Lebrun assimilated into it influences from both Renaissance and 17th-century Baroque art. The armour worn by Alexander, though inspired by classical prototypes, also recalls the theatrical armour of Baroque court pageants and carousels (a debased form of the tournament).

The final subject of the series, the triumph of Alexander (Fig. 6), is equally eclectic, with reminders of the splendours of the Versailles court. The massive urn and tripod brazier in the right foreground bring to mind the huge silver furnishings commissioned for the decoration of Versailles, conspicuous examples of which appear in another Lebrun tapestry design showing Louis XIV visiting the Gobelins.

Leclerc's copies of Lebrun's designs are to be valued in their own right among French graphic works of the 17th century. They are also a remarkable witness to the longevity and pervasive influence of Lebrun's paintings and tapestry designs, as well as to the continuing fascination with the Alexander the Great of history and of legend that has endured for centuries, and continues unabated even to the present day.

The etchings reproduced on pages 30–35 are from the collection of Soterios Gardiakos, Chicago.

INSY PAR LA VERTU SELEVENT LES HEROS
Entrée Triomphante d'Alexandre dans Babilone,
SIC VIRTUS EVEHIT ARDENS.
Alexander Babilonem sibi deditam Triumphali
curru sublimis inter civium acclamationes
et concentus ingreditur

Fig. 6: *Alexander's entry into Babylon*

K. Corey Keeble is associate curator in the European Department of the ROM. *After receiving his undergraduate degree in English and history from United College (now the University of Winnipeg), he spent two years on postgraduate work at the Courtauld Institute of the University of London, England. Although interested in 15th- and 16th-century armour and German Late Gothic panel painting, Mr. Keeble now concentrates his studies on Renaissance and Baroque bronze statuettes and terracottas.*

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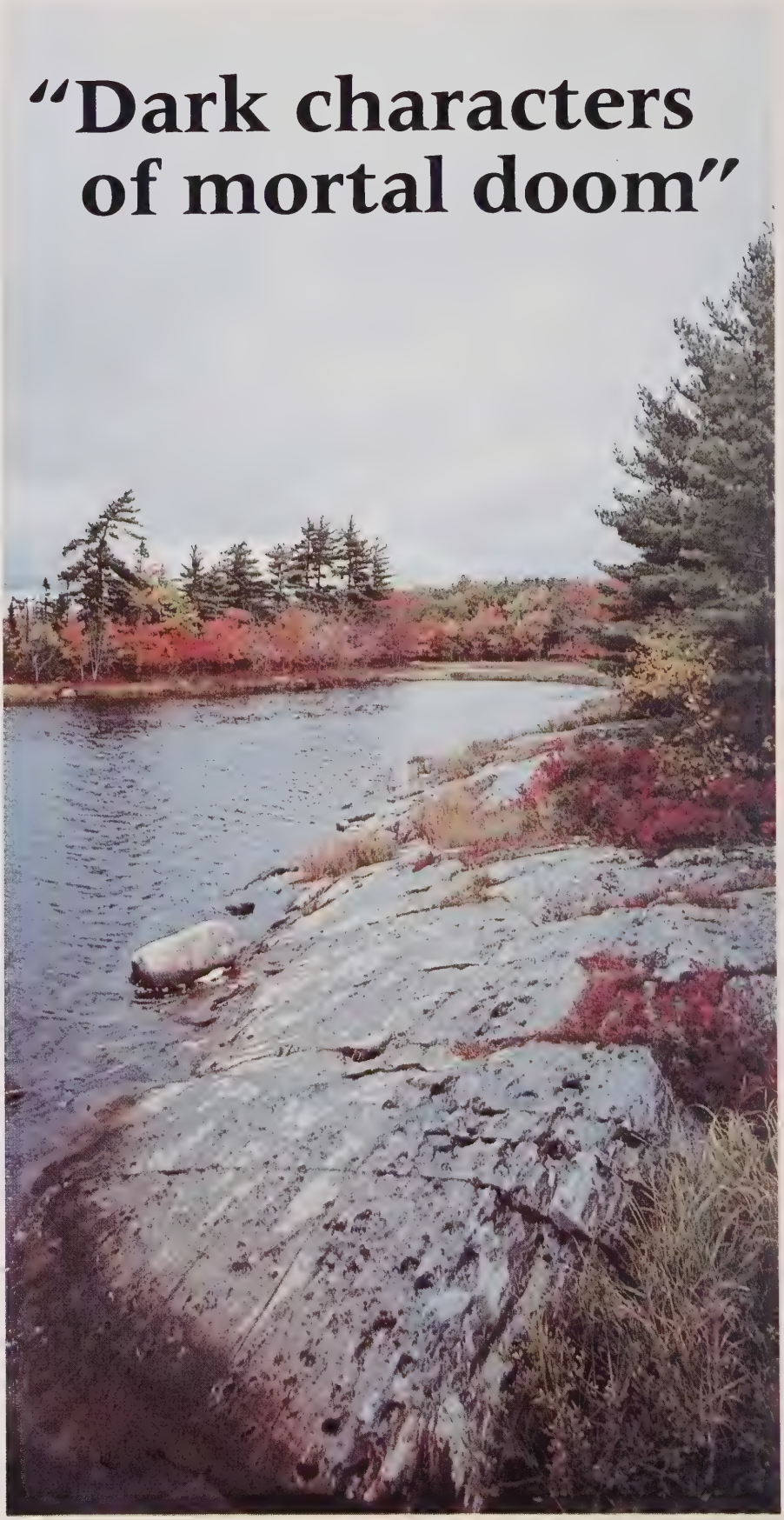
"Dark characters of mortal doom"

The petroglyphs of Kejimkujik Lake, Nova Scotia

Brian Molyneaux



Except for those otherwise credited, photographs on pages 36–43 are by the author.

WHILE engaged in studying the Native picture writing and gesture language of the New World, Colonel Garrick Mallery of the Bureau of American Ethnology wrote that he received "mysterious accounts" of petroglyphs in south-central Nova Scotia at a place known by the Micmac as Kejimkujik Lake. When Mallery arrived at the lake in the company of George Creed, a village postmaster, on 21 September 1887, he found a landscape that seemed remote from the surrounding countryside: the dry wooded hills and small farms along the two days' journey from Annapolis had given way suddenly to dense bush and wetlands, and then to a shallow lake bordered by cobble beaches and irregular rows of granite boulders pushed up against the forest margins. Mallery noted that the petroglyphs were carved "in a lonely spot—seldom visited except by hunters—covered by high water in the lake". George Creed had seen some of these carvings once before in 1881, on slate outcrops on the southeastern shore near a small, circular, and almost enclosed part of the lake known as Fairy Bay. He had agreed to guide Mallery there in order to "see and somehow copy" the glyphs.

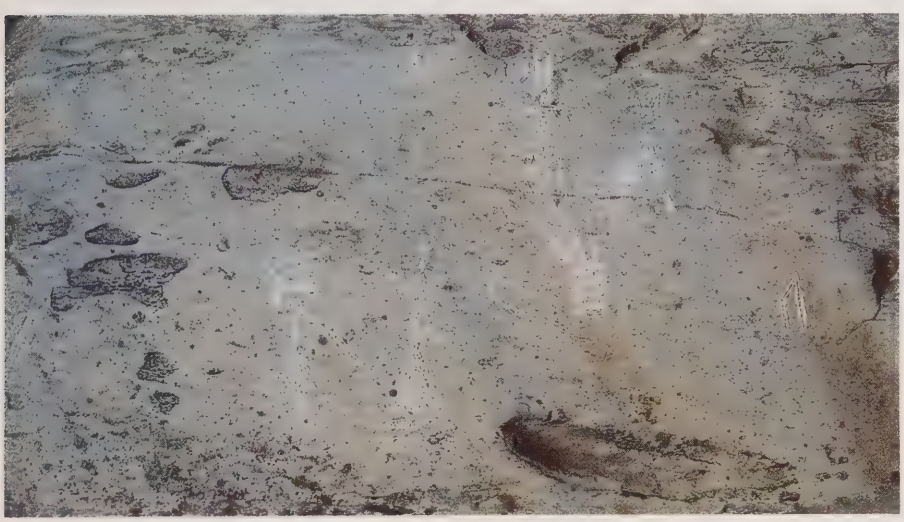
There were people in the surrounding area of Queen's and Annapolis counties who knew the rocks well. The lake was an important source of fish and game both to the Micmac who had occupied the area for thousands of years and to the European settlers who had begun to move into the adjacent arable lands at the end of the 18th century. By the 1840s the shore of the lake was permanently occupied by several Micmac families who had cleared small plots of land to raise corn and potatoes. Many of the people of both cultures visited the rocks and left their names. By the time Mallery and Creed arrived at Fairy Bay, the rocks read like a family register.

It was not these names, however, that Mallery was seeking. James F. More had made a brief reference to other petroglyphs in his *History of Queen's County*, published in 1873:

> . . . these rocks are of a reddish-brown slate and on which numerous names had been cut, some dating in the year 1824; there are also some rude Indian representations of animals, birds, &c., &c . . The rocks being soft and porous, these marks have been very much obliterated by the rains and ice.

Maurice Harlow of nearby Brookfield saw more carvings at a site some distance from Kejimkujik Lake on the Port Medway River and mentioned them in his diary in 1880:

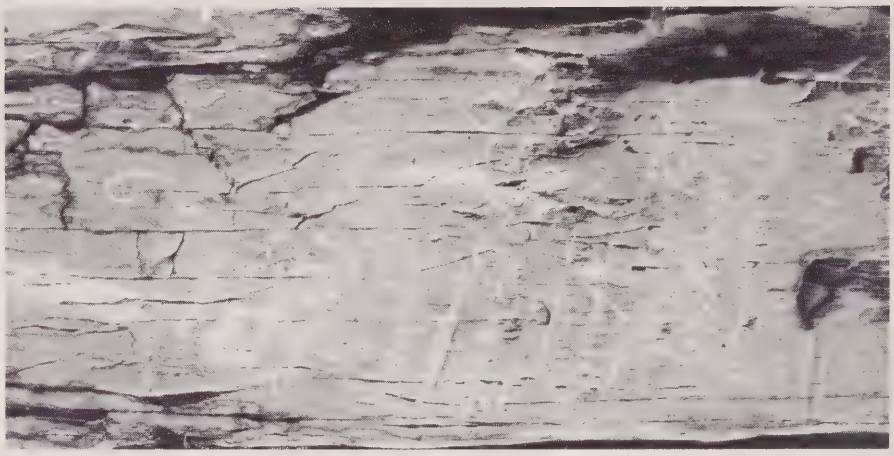
> Just above McGowan's Lake we saw various images cut in the rock. A jackknife, moose, churches, can be seen. Supposed to be worked by Indians or French Acadians.

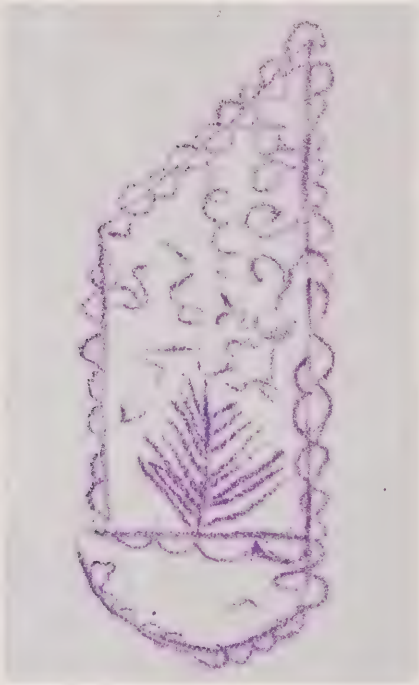


Opposite page: Early autumn on Kejimkujik Lake; the water has begun its slow rise over the slate outcrops.

Micmac people in ceremonial dress are carved as if in some long-forgotten procession. The women are identifiable by their peaked caps; the other figures are probably men, wearing some form of hat that has not survived to the present day.

Right: In their natural state the petroglyphs are virtually invisible. In order to record them photographically, the incisions have been painted in using a very fine sable brush and water-soluble poster paint.





In 1888 George Creed made this aniline dye impression of a peaked cap. It is now preserved with his large collection of petroglyph prints in the Public Archives of Nova Scotia.

When Creed's print is compared to an actual specimen from the ROM's ethnology collection, it can be seen how the carver was able to capture the intricate details of these caps.

The Acadians had never settled near the lake; but according to local traditions they had sought refuge there at the fall of Port Royale in 1710 and again after the expulsion of the majority of their countrymen by the English in 1756. During his visit to the sites in 1881, George Creed had seen some French names with dates near 1700; he regarded them as genuine because of their worn appearance.

The Micmac, on the other hand, had occupied the lake long before the French or the English came to Nova Scotia, and they would have had ample opportunity to carve on the rocks. By the time of Mallery's journey, their culture was largely misunderstood or ignored by the rest of the population, and had most certainly been altered by over 250 years of European contact and influence. The petroglyphs may have been the only record of Micmac lives on the lake in earlier times; no written accounts survived. In fact, the only written reference to Micmac beliefs about the rocks came from an unlikely source: a few lines of verse in a poem, "Fairy Falls", written by John McPherson, the self-styled "Harp of Acadia", who died in Brookfield in 1845:

> Here olden Indian legends say,
> Mysterious beings wont to stray,
> And etch on cliffs of slate
> Dark characters of mortal doom . . .

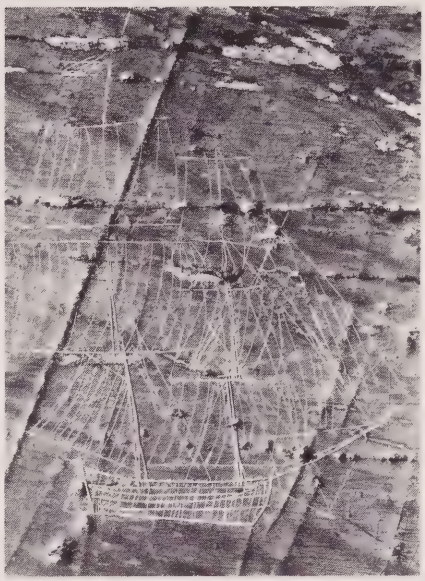
It was the possibility that the petroglyphs might reveal this hidden past that brought Mallery and Creed to Kejimkujik Lake in 1887.

It is still apparent to the present-day visitor why these particular rocks were once regarded as the abode of spirits and a place to carve images; they have an unusual appearance that sets them apart from the rest of the landscape. The soft slate was worn down easily during glaciation, so that now the outcrops lie close to the ground, following the gradual slope of the land into the lake. In the spring, when the water is high, the small areas of visible slate are rough and deeply eroded. As the waters fall during the drier months of summer, however, large expanses of rock with clear and unmarked surfaces appear. These slates bear the marks of their geological past clearly. The beds actually lie on their edges: the layers are visible as webs of parallel lines, etched lightly and darkened by erosion of the bluish-grey to reddish-brown rock. Other layers of slightly different composition from their surroundings run snake-like in variegated colours across the surface.

The most remarkable aspect of these freshly exposed rocks, however, is their texture. They are as smooth as drawing slates. Any sharp stone or tool will make a mark on the polished surface. Creed and Mallery made a petroglyph with the tip of an arrowhead; a Micmac told Creed several years later that a sharpened beaver's incisor was often used. Although some glyphs have been deeply cut, most have been scratched or lightly incised to take advantage of the ease with which the rock can be worked.

Since there was no need for the pounding, pecking, or abrading techniques

used at other petroglyph sites in the New World, the carvers of Kejimkujik Lake were able to produce images with the liveliness and fluidity of paintings, on an almost unlimited range of subjects. For example, a large number of sailing ships are pictured on these rocks, covering a long period of history, from high-decked galleons to the swift schooners of Mallery's time. The most expressive of these images capture the excitement of a full-rigged ship charging through heavy seas with billowing sails. The soft and smooth rock surface also provided an ideal medium for the intricate curvilinear designs favoured by the Micmac as a decorative motif. And there are many written petroglyphs—names, and even messages—in English and Micmac script. The carvers also were able to incorporate minute details in their images. Many glyphs have grooves as fine as human hair, and the smallest are no larger than postage stamps.



Under these ideal conditions, the Micmac carvers were able to give their work vitality and realism. The subjects of the pictures are often drawn from daily life: porpoise hunting on the ocean; sailing ships tended by canoes; a figure kneeling in a chapel; animals, people, and houses in simple landscapes; people in the traditional Micmac dress of tunic and leggings; Micmac women wearing their distinctive peaked caps; and in many instances, just the caps alone, each with its own special decoration.

The very characteristic of the rock that allowed the carver so much freedom, however, resulted also in the weathering that immediately began its own work on the petroglyph. The freshly scratched rock gradually changed colour until the carving blended with its surroundings and became virtually invisible to the naked eye. As the works of one generation of carvers receded into the background, others were superimposed upon them by a new generation unaware of the images that lay beneath. On the most heavily incised rocks, centuries of accumulation and erosion have resulted in complex palimpsests of glyphs. It is only as the sun rises or sets that all these creations can be seen: shadowy, ephemeral images, made visible by the slanting light for the brief period of dawn or approaching nightfall.

In September 1887 it required "pains and skill" to see the faint markings attributed to the Micmac, especially with the profusion of names and dates over them, as Mallery drily noted in his report:

> On the parts exposed in 1887 there were dates from 1800 to the current year, the number for the last year being much the greatest, which was explained by the fact that the wonderfully beautiful lake had been selected for a Sunday-school excursion.

Mallery had brought along linen and paper to make rubbings of the petro-

glyphs, but he was not prepared for the fineness of the images. It was probably Creed's knowledge and experience as a postmaster that provided a solution to the problem. If the rock was as smooth as a drawing slate, it was also an excellent printing plate. Using Creed's purple aniline pencil, they rubbed water-soluble dye over the petroglyph area, pressed down a wetted sheet of printing paper, and pulled it off, to reveal a negative impression of the incisions beneath.

Unfortunately, Mallery's and Creed's discovery came too late in the season. It rained on the second day of their expedition, and by the third day the already high lake had begun to rise over the remaining petroglyphs. With only a few images copied, the two men returned to Annapolis. As a correspondent reported in the *Halifax Morning Herald* the following day, however, the trip was regarded as a success:

> Colonel G. Mallery, of the Bureau of Ethnology, Washington, accompanied by Geo. Creed, of South Rawdon, returned to-day from Fairy Lake, about 34 miles to the south from here, where he has been making a scientific examination of the Indian "picture stones" . . . These stones are situated on the border of a lake, and are covered with characters cut by the Indians. Representations of ships, trees, moose, men, cattle, etc. are still quite legible although there are traces of others no doubt cut many hundreds of years ago. The Colonel said the Indians first began to cut on these stones about five hundred years ago, but Mr. Creed is of the opinion that it was as many thousand. He leaves for Washington tomorrow, well pleased with his trip.

Discovering the canoes

When the waters of Kejimkujik Lake reach their lowest ebb at the end of a dry summer, areas of slate are exposed for a brief time only. Because of their long submergence they are thickly coated with algae. This slimy cover bakes hard in the drying winds and sun and soon becomes a dark skin, obscuring the rock surface completely.

Were there petroglyphs hidden here? If the lake levels were consistently lower for some time in the past, the algae would have retreated, leaving some of these rocks bare—and suitable for carving. The resurgence of the waters would cause the algae to creep up again, covering the images until the next prolonged dry period. With this tantalizing possibility in mind, an assistant and I, during an expedition in 1981, soaked and scrubbed long sections of the shoreline rocks as the lake fell. Eventually, on an isolated, almost vertical rock face, my assistant discovered the unmistakable groove of a tool mark. More and more lines appeared until two boats with large, uneven sails stood out clearly against the freshly cleaned slate. Other images were exposed nearby: a deer or moose, a small canoe with two figures, and a motif that resembles the shaking tent used by shamans for divination.

The vagaries of the algae encroachment were apparent: none of these glyphs was recorded by Creed and Mallery in 1887–88, but the boats were recorded by E. S. Eaton in the early 1950s and then lost once again until our field expedition of 1981. Unfortunately, it is not known how long the algae might have protected these images from the abrasion of ice and the relentless scratching of later visitors to the rocks.

The unusual boats provide us, however, with an image of past Micmac culture. As a

The next year Creed camped with his family by the lake, and during the summer he recorded more than 300 additional petroglyphs with his accurate printing method. Mallery returned briefly as the season progressed. As the rains once again flooded the lake over the rocks, they left for the last time.

On 13 November 1888 George Creed presented a paper about the petroglyphs to a meeting of the Nova Scotia Historical Society; many of his prints were hung in the Legislative Council Chamber for inspection by the members, and accounts of the discoveries were reported in newspapers across the country. In 1893 Colonel Mallery published his seminal work on Native pictography, *Picture-Writing of the American Indians*, in which he devoted several pages to a discussion of the Kejimkujik glyphs. In the ensuing years, however, neither Creed nor Mallery was able to discover the meaning or significance of the images to the Micmac. Creed provided only the barest clue: in a letter to Mallery on 30 June 1890, he wrote that the Micmac "connect most of [the petroglyphs] with their old legends and mysteries". By the turn of the century, the glyphs were largely forgotten.

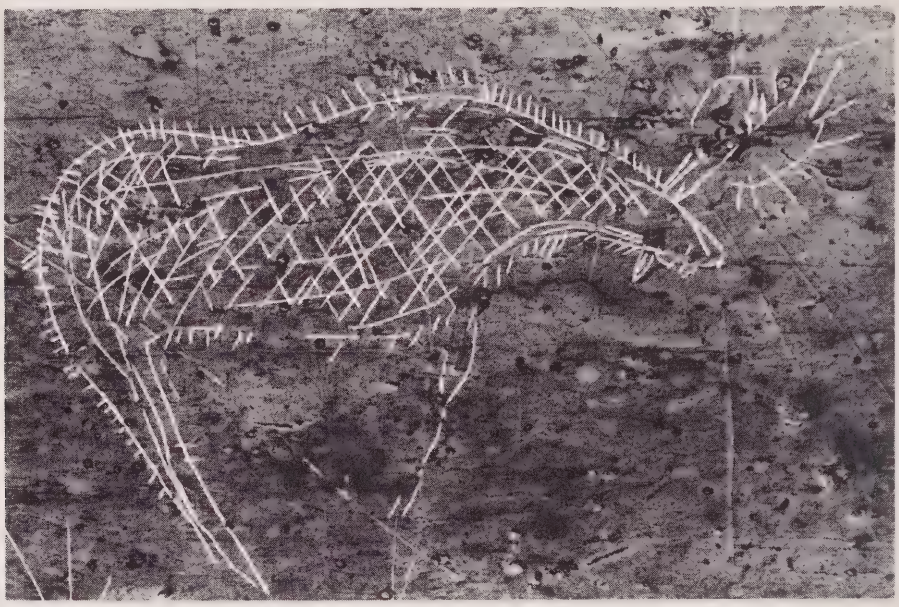
It is almost 100 years since Mallery and Creed worked on the rocks of Kejimkujik Lake; the petroglyph sites are now part of Kejimkujik National Park and many more generations of people have carved there. The Micmac images, difficult to see in 1887, have been further obliterated by the effects of this long exposure. Fortunately, the work of George Creed has survived. A collection of the petroglyph prints was obtained from Creed by the Smithsonian Institution in 1889; a set deposited with the provincial government for safe-keeping was transmitted to the Nova Scotia Museum in 1910; and the remaining copies were donated by Creed's descendants to the Public Archives of Nova Scotia in

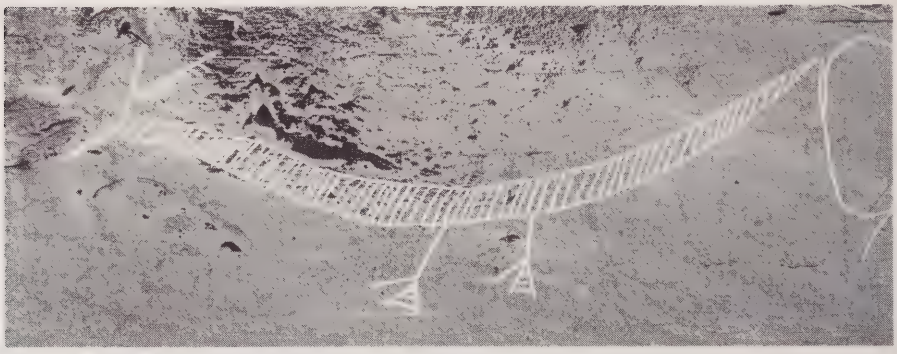
maritime people, the Micmac fashioned canoes specifically for use on the open sea. These rough-water craft were normally small and swift, for use in hunting porpoises, but there may have been much larger craft up to eight metres in length. All these canoes could have been fitted with sails, for the Micmac ranged widely on the eastern seaboard.

Indeed, there are reports of the use of sails on birch-bark canoes from the early periods of European colonization. In 1685, Monsieur de Meulles travelled down the coast of New Brunswick in the rough seas of November in a "barely four-seated" birch-bark canoe with yard and sail, after his ship went down off Miscou Island in the Gulf of St. Lawrence. His journal relates the skilful way his Micmac guide sailed the canoe in heavy seas and, when the mast came loose, repaired it in time to save the canoe from being dashed against the rocks. This encounter with rough seas would have been the common experience of the coastal Micmac people.

Unfortunately, the canoes on the rocks of Kejimkujik Lake, manned by at least twelve figures each, have no such recorded history. There are several details of these petroglyphs, however, that suggest the object of their timeless voyage. In the bow of each of these craft there is a large form topped by an object similar to the Micmac headwear seen so frequently on the rocks. If these canoes were incised in historical times, these forms in the bow may be reminiscent of the banners carried in Roman Catholic religious festivals, some of which featured canoe processions. Then again, if the forms were inspired by the aboriginal Micmac culture, the enlarged figures might represent important people or spirits guiding these craft on their unknown journey through the seas.

A painting of Micmac daily life by an early 19th-century anonymous artist. From the collection of the National Gallery of Canada, Ottawa.





1948. The printing paper has yellowed and become brittle with age, but the purple aniline dye is still strong, preserving the imprint of the petroglyphs as they were a century ago.

George Creed could only write that "some little light has been shed on the inscriptions copied there", but his work, along with additional records taken in a 1981 project funded by Parks Canada and supported by the Royal Ontario Museum, represents an accurate visual record that may yet reveal some of the significance that the sites held for the Micmac.

The earliest known reference to the petroglyphs, John McPherson's poem, contains the suggestion that spirit beings made the images; Creed's inquiries were met with the same response. No specific story was ever written down, but there is a tale that was told to the ethnologist Elsie Clews Parsons on Cape Breton Island that illustrates the kind of beliefs that might have been held about the Kejimkujik petroglyphs:

> Sah, sah sah, long, long, long ago, seven men said, "We better go to see Uglochot' so we may be better off." They went in a canoe, went along for many days. They took a notion to come to shore. They landed. One man built a fire, they cooked their dinner. After dinner they smoked their pipes, lying down. One man heard something tapping. There were a thousand million people in the sand, making pictures in stone. "Look what is there." The people stopped working. "What are you doing?"—"Making pictures in stone." They had made pictures of the canoe and of everything in it and of the men themselves.

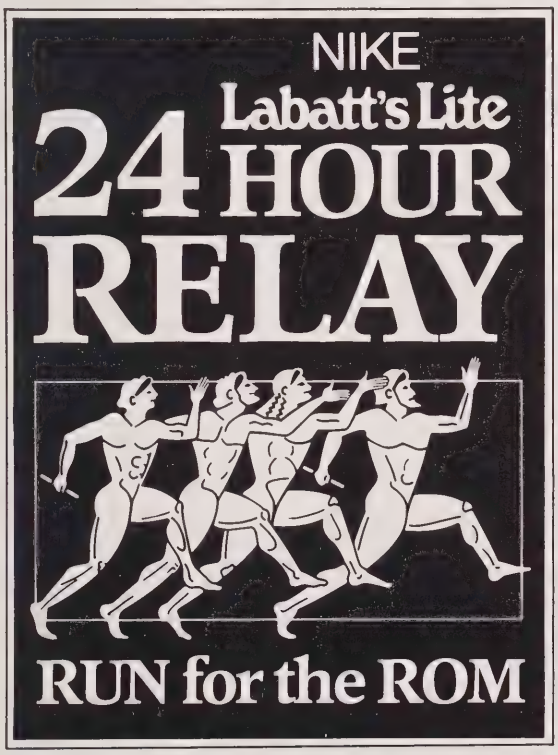
In another tale, these tiny creatures, called *hamaja'lu*, are described as no longer

than two finger-joints; they are said to live along the shore by the thousands and to produce water-worn and pitted stones by chewing or picking at them.

Stones and other objects of unusual shape were regarded by the Micmac as sources of *keskamzit*, or magic good luck. Even features of the landscape were taken to be the marks of supernatural beings—especially of the great transformer, Gluskap. A large rock near Upper Musquodoboit was said to be a man covered by a blanket, transformed into stone by Gluskap as he lay sleeping. As late as 1912, offerings were still left there. And on Bras d'Or Lake, there is an opening in a cliff that was called Gluskap's Door. Outside the opening on a stone shaped like a table, hunters would leave offerings for good luck.

The slate outcrops of Kejimkujik Lake could have been regarded in this way by the Micmac. Many of the images first recorded by George Creed appear to represent figures of Micmac mythology: the giant crane, Kulloo; star husband, who married a mortal girl and took her into the sky; snakes, messengers to the underworld; and stars, the Micmac ideogram representing heaven. In a humorous aside to Mallery, Creed wrote that "the discoveries made in the course of this work have about converted me to the belief that the rock spirits, and no human beings have been the artists in many cases". He was referring to "the marvellous grace of lines and curves" and the great care with which many of the images were made. But he probably also sensed the effect of the rocks themselves both on the first carvers, whose markings came to be attributed to spirits, and on the later ones, who may have simply found the rocks to be a place of repose from the toil of subsistence farming in Queen's County. As the realm of the spirit world was distinct from that of daily life, so these rocks are set apart from the rest of the landscape, with their strangely polished surfaces, crossed by serpentine bands of colour, rising from the lake and then disappearing with the change of seasons.

Brian Molyneaux is a research associate with the ROM*'s Department of New World Archaeology. He specializes in prehistoric art and is currently studying the rock art of the Canadian Shield and the petroglyphs of Nova Scotia.*



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A Coverlet for Hannah Moot

A recent gift for the Canadian textiles collection

Dorothy Burnham

Hannah Moot. This photograph probably dates from about the time of her marriage to Adam Huntsman in 1854.

THIS story begins over forty years ago, when the Royal Ontario Museum's Textile Department, then still in its infancy, received an unexpected gift: the ROM's first Canadian handwoven coverlet. Given long before Canadiana became a fashionable study, the coverlet provided the first impetus towards the gathering of the ROM's now famous collection of Canadian textiles.

It was in 1947 that the Textile Department seriously set about the business of locating and recording outstanding textiles made in Ontario. The project had only a small budget, but many people worked quietly on it; staff when they could squeeze time from other duties, and a number of enthusiastic volunteers. Our top priority was to gather information. Material was borrowed, brought to the Museum, and photographed; notes were made; and then the pieces were returned. We had no money for purchases, and as long as families were aware of the importance of preserving their heirlooms, we felt the material was fairly safe with the children and grandchildren of the original owners.

Slowly the files grew as the knowledge gained from many interviews was recorded. Then something started to happen. Elderly people, feeling that the next generation might not give the care necessary for the preservation of their treasures, began to entrust the pieces to the careful hands of the Textile Department, so as to preserve for future generations both the objects and their own family's connection with them.

The building of our Canadian textiles collection has not always been that simple. Often a gap in it could not be filled by a gift, so many good friends of the Museum were drawn in as donors. As the project widened to include all of the eastern half of Canada, more travel funds became necessary; some of these were provided by the Museum, some by a Canada Council grant to Harold Burnham, then curator of textiles. In 1971 the Textile Department's efforts resulted in a major exhibition of Canadian weaving called "Keep me warm one night", an intriguing title taken from an early weaving pattern. A year later a large publication of the same name followed (University of Toronto Press in conjunction with the ROM); it is now in its fourth printing.

Since the Textile Department's Canadian research project started thirty-six years ago much has been accomplished, but Canada is large and diverse and the search encompasses the whole period of settlement and, now, the whole country. Much remains to be discovered. With the ROM necessarily preoccupied at present with the need for new gallery displays and more efficient storage and at the same time hampered by restrictions on staff, the project must limp along for the time being under the care of one retired curator, the author of this article. We look forward to a future in which this work will again become a vital part of the Museum's outreach; but even in this quiet period there are many hopeful happenings. The seeds that were so well sown are still bearing fruit.

One recent gift is particularly heartening. It is a jacquard coverlet woven by Wilhelm Armbrust of Jordan Harbour. In 1834 Armbrust became the first weaver in Canada to make use of an early 19th-century invention, the jacquard patterning attachment for the handloom. This was a device, worked by punched cards, that enabled the weaver to produce designs closer to figurative motifs than previous weaving equipment had allowed. Armbrust wove special coverlets, among other things, for his neighbours in the Niagara Peninsula, and a number of examples survive. His most popular pattern had four roses; this was the one usually chosen when a marriage coverlet was ordered. In the corner of these coverlets Armbrust often put two hearts hanging from a balance, the date, and the initials or names of the bride or of the wedding couple. In 1846 Armbrust wove such a four-roses coverlet with two hearts in the corner for Hannah Moot. Sixteen years old at the time of the commission, she did not marry until quite a few years later, so the coverlet must have been given in preparation of her dowry.

The technique used in the coverlet, in which two separate layers of cloth change places to form the pattern, is typical of Armbrust's work. Most of his coverlets have one layer of white cotton and the other of dark blue wool, which gives a rich but very staid effect. The coverlet woven for Hannah Moot is dif-

Unlike the usual combination of dark blue wool on a white cotton background, both layers of Hannah Moot's coverlet are of brightly dyed handspun wool. This detail shows the device of two hearts hanging from a balance that Armbrust used in the corner of marriage coverlets, the year it was woven, and Hannah Moot's initials.

The coverlet woven in 1846 by Wilhelm Armbrust for Hannah Moot. It is in the popular four-roses pattern, a design used by different weavers in many variations.

ferent: both layers are of handspun wool, and one is bright red and the other a strong blue, a glorious combination.

Hannah's coverlet, woven so long ago, came down in her family to a granddaughter, Mrs. Ernest A. Perry of Vineland, Ontario. When she lent it to a special exhibition at the Jordan Museum in 1965, Harold Burnham saw it, and after the exhibit closed he called on Mrs. Perry to borrow it for recording. As was our custom, when the piece was returned to its owner copies of photographs and notes went with it. That was a busy year for the Canadian research project—150 pieces were recorded in all—but in spite of the volume handled, the glorious colour of Mrs. Perry's coverlet remained in the mind as an especially bright memory.

Time went by, and when Mrs. Perry died, her youngest daughter, Miss Myrna Perry, inherited the coverlet and took it with her to Nashville, Tennessee. With the coverlet went Harold Burnham's notes, and these revealed to its new owner that the coverlet was something more than a pleasant memory of her old family home. Miss Perry contacted the Textile Department to find out if the coverlet was still considered to be very special. When she was told that it was, she decided that it should return to Canada. In the summer of 1982, when she came north for a holiday, she brought with her her great-grandmother's wedding coverlet and gave it to the Royal Ontario Museum.

The Museum is most grateful to Myrna Perry for her generosity in repatriating this charming example of the skill of an early Canadian weaver. In itself this gift is exciting, but what is no less exciting is the realization that this is simply the most recent in a series of such family gifts that stretches back to the first coverlet that came to the Museum in 1941.

Now a research associate of the Textile Department, Dorothy Burnham joined the ROM *staff as a draughtsman in 1929. In 1939 she became the first curator of the Textile Department and in 1947 launched the research project on the history of Canadian handweaving. This resulted in the 1972 study* Keep me warm one night: Early handweaving in eastern Canada *written with her husband, Harold Burnham. She is known for her book on the construction of simple basic costumes,* Cut My Cote, *and the more recent* Warp and Weft: A Textile Terminology, *both published by the* ROM. *Although officially retired, Dorothy Burnham is still active in Museum work.*

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THE · GROWING · COLLECTIONS

In 1857–58 Captain Sir Alexander Moncrieff visited Canada West and the Hudson Bay Company Territories, now Manitoba, in search of sport and adventure. During his visit he painted watercolour sketches of landscapes, settlements, buffalo hunts, ceremonies, and the inhabitants of the Canadian frontier. An album of twenty-six of these sketches in the Canadiana Department is an acquisition made possible by a contribution from the Government of Canada under the terms of the Cultural Property Export and Import Act.

A View of Fort Garry in Winter, with the fort in the background, gives a detailed portrayal of modes of sled and sleigh travel, as well as of the costumes of fur traders and Native people.

An unfinished but vigorous portrait sketch of *Three Métis Guides* who had accompanied the artist on a winter journey from Fort Garry, now Winnipeg, to Crow Wing in Minnesota, identifies the subjects as Pierre Duoname, George Klyne, and J. Monkman.

In *Bannatyne Castle, Red River* on 9 January 1858 a dog howls to the tune of a fiddle while Native people, voyageurs, and settlers dance in celebration. Andrew Bannatyne was a free trader at the Red River settlement who later became a councillor of Assiniboia and the North West Territories. Another inscription on the sketch, "De Salaberry safe through", refers to Charles d'Irumberry de Salaberry, a member of the Canadian exploration expeditions of 1857 and 1858 to the Red River.

M.A.

Bannatyne Castle, Red River by Alexander Moncrieff.

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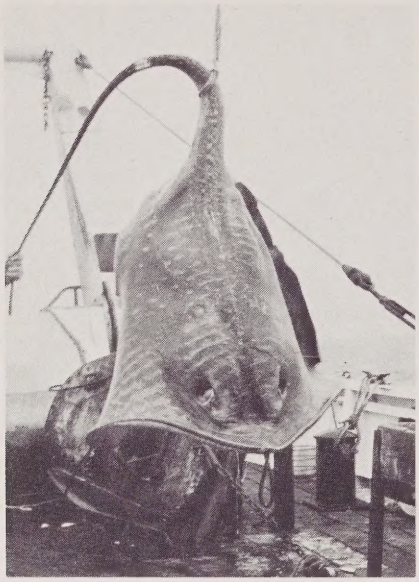

In September 1982 Marty Walters of the Ichthyology and Herpetology Department participated in a western North Atlantic trawl survey as a temporary research associate to the National Oceanic and Atmospheric Division of the U.S. government. During the eighteen days of surveying, Ms. Walters collected approximately 140 different species of fish for the ROM.

One of the more interesting catches was a 135–180 kg stingray (*Dasyatis*). Once it was on deck, great care was taken to disarm it of the large poisonous spines on the base of its tail, from which the stingray gets its name. The fish could then be measured, weighed, and released.

Several members of the Myliobatidae family were caught during the survey, including a bullnose ray (*Myliobatis freminvillei*) and a cownose ray (*Rhinoptera bonasus*). The latter provided a unique experience for personnel on the trawling vessel: once on deck, it gave birth to four fully developed young cownose rays. Most rays that are caught, because of their large size, are difficult to handle and transport. However, the four young rays will make an ideal addition to the ROM collection.

M.W.

Weighing the stingray *Dasyatis*.

In 1981 the Department of Invertebrate Palaeontology purchased a collection of about seventy specimens, including some extraordinary complete examples, of the large Middle Cambrian trilobite *Paradoxides davidis* from Manuels in southeast Newfoundland, a classic locality now protected from collecting.

Paradoxides is characterized by a large semi-circular cephalon (head-shield) with long genal spines; a long tapering thorax (body) containing sixteen to twenty-one segments, each with backward directed spines; and a very small pygidium (tail). It is an important index fossil, occurring in rocks from England, Europe, and North America. The ROM specimens were collected by R. Levi-Setti of Chicago in 1974–77 and represent duplicate material to the type and figured specimens in J. Bergstrom and R. Levi-Setti's "Phenotypic variation in the Middle Cambrian trilobite *Paradoxides davidis* Salter at Manuels, S.E. Newfoundland", *Geologica et Palaeontologica*, 12:1–40. They were purchased with the aid of a grant from the federal government under the Cultural Property Export and Import Act.

J.W.

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